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THE BRITISH
GYNÆCOLOGICAL JOURNAL
VOL. XIX.

THE BRITISH GYNÆCOLOGICAL JOURNAL

BEING THE JOURNAL OF

THE BRITISH GYNÆCOLOGICAL SOCIETY

VOL. XIX.

EDITED BY

J. J. MACAN, M.D.

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THE BRITISH GYNÆCOLOGICAL JOURNAL.

VOL. XIX.—No. 73.

MAY, 1903.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 12, 1903:

DR. HEYWOOD SMITH, PRESIDENT, IN THE CHAIR.

THE PRESIDENT mentioned that the Council of the Society, anticipating the feelings of the Fellows generally, had already written a letter of condolence to Mrs. O'Callaghan upon the lamented death of her husband, Mr. Robert O'Callaghan, one of their earliest Fellows and a frequent and esteemed contributor to the proceedings of the Society.

SPECIMENS AND CASES.

CYSTS OF THE ROUND LIGAMENT. By H. MACNAUGHTON-JONES, M.D., M.A.O., F.R.C.S.I. & EDIN.

MANY years since I had an experience in a case of rupture of the bowel which I think was unique. I quote it now from memory, for I have, unfortunately, lost the notes.

A young married woman was sent to me by her medical adviser, who wished me to give an opinion as to the nature of an inguino-labial swelling, as he was doubtful as to its being a hernia of the bowel. I found it partly reducible and answering to all the tests of hernia. I came to the

conclusion that it was a hernia, and advised an operation for its radical cure. The friends did not like the thought of this, so a few days after I saw her she was taken to the late Sir Spencer Wells, who expressed the opinion that it was a hydrocele of the round ligament, and that it was not necessary to interfere. I heard no more of the patient until some twelve months subsequently, when I was sent for hurriedly late in the evening. She lived at Wandsworth. When I arrived I had the following history from the same medical man.

She had gone on without any trouble until a few days before I saw her, when the swelling suddenly increased in size, became painful and more tense. Efforts to move the bowel had failed, and the reason for my summons was that there had been sudden collapse with cessation of the pain, and all the symptoms of a ruptured bowel. Of the occurrence of this I had no doubt when I saw her. There were no facilities for operating on the spot, so within a few hours she was safely in a Home, and I made an artificial anus in the right inguinal region. I must here mention that within a recent period a swelling, less in degree but of the same nature, had appeared at the left side. The patient did well, and the artificial opening had closed perfectly, when quite suddenly the area over the swelling at the left side became red and painful. After some palliative efforts to restrain the inflammation I decided to open what I believed to be another bowel abscess, and found when I did so much the same state of things as had existed on the right side—an opening in the bowel and faecal matter in the abscess. I again made an artificial anus, and in due time was pleased to find the bowel acting. Its movements were natural and healthy. I had no doubt of the patient's recovery, and looked on her as convalescent. Unfortunately, the strict rules of diet I had laid down were now disregarded in the Home, and without my knowledge she was given some steak with capers, of which she ate plentifully. She was seized with sickness, vomiting and pain. General peri-

tonitis rapidly set in, and she died some thirty-six hours from the onset of the symptoms. I was naturally anxious to have an autopsy, but the friends would not consent, and it was with difficulty I succeeded in obtaining permission to investigate the state of the parts at either side where I had operated. At the right side I found the lumen of the bowel quite restored. At the left, in the neighbourhood of the recent rupture, there was an opening, an escape of faecal matter, and a large quantity of undigested capers. This, I believe, was the cause of death—obstruction with peritonitis set up by these latter.

I have never since seen a hernia in a woman for which I have not advised the radical operation. I go so far as to say that no woman who can be operated upon should be the possessor of a truss. From the time of the occurrence of this case until quite recently I have had no difficulty in the diagnosis of any swelling in the inguino-labial region.

The anatomical points of gynæcological interest in connection with the round ligaments are as follows: The permanency of the plica gubernatrix from the Wolffian body (the analogue of the gubernaculum in the male) constituting the round ligament of the ovary in the female, the attachment of which to the uterus arrests descent of the ovary except in rare cases, when, passing by the canal of Nuck, the ovary may reach the labium; the peritoneal accompaniment of the round ligament which corresponds to the processus vaginalis in the male, and which, when not obstructed, forms in its prolongation the patent canal of Nuck; thirdly, the presence of areolar tissue and vessels in and around the round ligament, and the prolongation of the transversalis fascia from the internal abdominal ring. Now, by these anatomical data we can explain the presence of intestinal hernia, epiplocele, hydrocele, incarcerated ovary, and a cyst or fibroma in the canal and labium. The diagnosis is not, as in the cases I now record, always easy. Pozzi, in speaking of the fluid contained in cysts in the canal, says that the persistence of the canal of Nuck is

looked upon by most authorities as explaining the presence of such cysts, though this is denied by Duplay, and Schroeder has reported a case in which he was able to return the fluid into the abdomen, this demonstrating a communication of the cyst with the peritoneal cavity, and thus establishing a resemblance to congenital hernia in the male. As will be seen, this is exactly what occurred in one of my own cases. Sometimes the cyst may be seated in the *interior* of the round ligament. This may be due (Weber) to a persistence of the female gubernaculum in its foetal form.

A woman, aged 26, unmarried, consulted me early in 1902 for a swelling in the right groin. This she first noticed at the end of 1901; it gave her but little pain, but it varied in size, and told against her in her work. On examination I found a swelling in the right inguinal region, extending almost into the labium. There was an impulse on coughing, and by steady pressure in the horizontal position the swelling was reduced and practically disappeared. This collapse of the tumour puzzled me, as I had rather inclined to the view that I was dealing with a hydrocele of the round ligament. It was not possible for her to undergo an operation at the time, so I devised a special horseshoe air-pad truss to wear over the abdominal ring. This she wore for several months, when I again saw her, and then I found that the swelling had practically disappeared. I advised that she should still wear the truss. Shortly after this she had serious domestic trouble, and became very thin. The truss slipped up from the position I had intended it to be worn in, and the swelling reappeared again, and now gradually increased to the size of a large pigeon's egg. When I next saw her I found this swelling was tense, and not now influenced by pressure. I advised operation. I was not confident of my diagnosis, and though I now leaned to hernia, I had a doubt as to the cystic nature of the tumour. On dissecting down to the surface of the sac this was seen to be of a deep blue colour. The wall consisted of a thin membrane, and was covered with vessels.

It had much the appearance of the wall of a hernial sac. On opening it, fluid blood escaped. The sac was attached to the round ligament, and had formed adhesions in the canal up to the internal abdominal ring. I dissected out the sac and explored the internal ring, which I found empty. It was clear that the canal of Nuck was patent, and that the cyst was a hydrocele, into which blood had escaped. The round ligament was drawn forwards and fixed at the internal ring, which was then closed, and the canal itself was obliterated by a series of cross sutures which included the round ligament. The wound healed aseptically.

For the second case I am indebted to Dr. Roe Carter. A lady suffered from disease of the adnexa and incontinence of urine due to exaggerated anteflexion of a hypertrophic uterus; there was also what we believed to be an irreducible hernia, though with the experience of the last case before me a qualified diagnosis was given. Here also the tumour varied considerably in size. After the operations of salpingo-oöphorectomy and fixation of the uterus were completed and the abdominal wound was closed, I opened the inguinal canal and found an isolated cyst, about the size of a small walnut, on which the round ligament was spread, and to which it was attached. There was no funicular process of peritoneum as in the last case, the internal ring and the parts above the cyst being normal in their appearance and relations. The cyst was dissected out and the canal closed, as in the last case. Recovery has been perfect.

We have here examples of two distinct types of round ligament cysts; the one obviously the consequence of a permanent canal of Nuck and connected with the persistent peritoneal process, for when I first saw the patient the fluid was evidently returnable into the peritoneal cavity. The other cyst originated most probably in the areolar tissue in the round ligament, or possibly from a persistent embryonic gubernaculum. Either of these forms of cyst of the round ligament is liable to be mistaken for hernia,

or the latter, possibly, for an incarcerated ovary ; a more serious error, as in the first case I related, is that hernia may be mistaken for a cyst or a hydrocele. Under any circumstances the safe rule, for every dubious swelling in the inguino-labial region in a woman, is to operate.

DERMOID CYST OF RIGHT OVARY, ADHERENT APPENDIX,
AND CYSTIC DEGENERATION OF THE LEFT OVARY.
By FREDERIC BOWREMAN JESSETT, F.R.C.S.

The following notes were read illustrating the specimens :—

A. C., aged 32, the mother of three children, the youngest three years old, and had never miscarried ; she was admitted into the Cancer Hospital, January 7, 1903, complaining of acute pain in lower part of abdomen passing to both sides and back. Discomfort was first noticed last March, and she had rather sharp hæmorrhage in April and May, but since then had suffered, more or less, from amenorrhœa. The pain complained of had gradually increased in severity, she described it as a constant dull aching with frequent paroxysms of sharp pain. She had lived in India for some years, and had just recovered from an attack of dysentery, which had lasted for the last four months.

Examination disclosed a distinct resistance and hardness over the lower part of the abdomen, especially on the right side over the appendix. On deep pressure the patient complained of pain, which, however, was not acute. *Per vaginam*, a hard, irregular swelling was felt in the pouch of Douglas, slightly mobile, and extending upwards towards the right side, but nothing very definite. The uterus was quite normal in size and position.

On January 13 I operated, making the usual incision in the median line between the umbilicus and pubes. On exploring the pelvis on right side a tumour was discovered which was very adherent posteriorly, the adhesions were readily broken down, and the tumour when drawn up

through the wound proved to be a dermoid cyst of the ovary and was removed. The left ovary was found to be much enlarged and cystic, and so disorganised that I deemed it advisable to remove it also. The appendix was then discovered to be very much thickened, and had some adhesions which evidently had been attached to the right ovary; it was therefore removed by passing a double ligature through its mesentery and ligaturing on each side. The stump was then touched with a drop of pure carbolic acid, and the neighbouring peritoneum carefully stitched over it with catgut.

In removing the appendix I much prefer passing a fine silk ligature around the whole of it, to the method often adopted of stripping and turning back the peritoneum, and applying the ligature around the muscular and mucous coats only; for I have found by experiment in the *post-mortem* room, that by ligaturing the appendix in its entirety the mucous coat is completely divided, just in the same manner as the inner coats of an artery are divided after being tied.

Mr. Jessett showed also :—

A FIBROID OF THE UTERUS WITH PERSISTENT HÆMORRHAGE IN A PATIENT WHO HAD HAD VENTRO-FIXATION PERFORMED FOR RETROVERSION AND PROLAPSUS UTERI.

This case is of interest as it is the only one in which I have had an opportunity of seeing the result of ventro-fixation. J. B., aged 46, widow, was admitted into the hospital in January, 1901, suffering from prolapse and extreme retroversion of the uterus. No pessary was of any use, and as she was suffering much pain and discomfort I determined to perform ventro-fixation. The result was everything that could be desired, but in July, 1902, in my absence, she came under the care of Mr. Leaf, suffering from menorrhagia and endometritis, and he, in August,

dilated the cervical canal and curetted the uterus. She appeared to derive a certain amount of benefit from the operation, but still lost a great deal at her periods, and on my return from my holiday I found her very anæmic and complaining of pain referred to the uterus. On examination there appeared to be a good deal of uterine catarrh, but the sound passed a normal distance, and the uterus was in a good position. I had her placed under ether and again dilated and thoroughly explored the uterus, but could find no sign of a polyp to account for the hæmorrhage. I swabbed the whole uterine cavity freely with fuming nitric acid, being careful to neutralise any excess by application of solution of bicarbonate of soda. She derived a great deal of benefit from this, the next two periods being not at all excessive. In December, however, she had an alarming flooding, which lasted some days and was with difficulty controlled by administering ergotin hypodermically and plugging the uterus with gauze soaked in adrenalin. This left the patient in such a very exhausted condition that I determined to remove the uterus directly her state would permit, and did so about a fortnight later. I made an elliptical incision near the old scar, and opened the abdomen, expecting to find the ventral fixation fairly well preserved. Such, however, was not the case, the attachments of the uterus to the parietes were merely by means of adhesions some half to one inch long, as you will see in the specimen. There were also a few adhesions to the omentum. The uterus was readily removed, and on cutting it open an intramural submucous fibroid was found occupying the fundus and had of course been the source of the hæmorrhage. The patient has now made a perfect recovery.

It is interesting to notice these adhesions, as in performing the ventro-fixation I had fastened the uterus with Chinese silk sutures passed through the peritoneum, fascia, and muscular tissues of the parietes, and I fully expected to find the uterus firmly adherent. In the condition in

which it really was, there would have been nothing to interfere with pregnancy should it have occurred, in fact, there was nothing more or less than an artificial peritoneal ligament, sufficient to prevent retroversion again occurring, but not sufficient to interfere with the free mobility of the uterus, nor anything which, in a case of complete prolapse, would have prevented a recurrence of the displacement. I should be glad to hear if any other Fellow of the Society has had an opportunity of seeing the results of a similar operation performed by them. There are many cases recorded in which women have become pregnant after ventro-fixation, and gone the full period without any inconvenience being experienced, and possibly the conditions were the same as in this one.

The PRESIDENT said that he had found that when the ovary was the seat of much inflammatory mischief, even in the beginning of cystic disease, the menstrual flow was increased. Mr. Jessett mentioned that the dermoid tumour had been associated with amenorrhœa and dysmenorrhœa; it would be of interest if any other Fellow had found the flow to be diminished in dermoid cases also, or in any other special form of ovarian disease. Dr. Garrett Anderson would perhaps tell them in regard to the stretching of adhesions after ventro-fixation, what Dr. Howard Kelly's attitude towards that operation was at present.

Dr. L. GARRETT ANDERSON (a guest) said that while in Baltimore last year she had had the advantage of seeing a large number of cases treated by Dr. Howard Kelly. She could not remember any instance of abdominal section some time after a previous fixation, but Dr. Kelly often referred to cases in which he had had an opportunity of studying the condition of the uterus and its adhesions after ventro-fixation, and in many the adhesions, as remarked by the President, had stretched to a considerable extent. Dr. Kelly's practice now was to fix the uterus to the peritoneum only, and not to the whole thickness

of the abdominal wall, and he had quite given up passing the sutures through the posterior surface of the uterus.

Dr. MACNAUGHTON-JONES referred to the case he had brought before the Society last April in which, more than two years after a ventro-fixation, he had had to open the abdomen a second time to remove an ovarian cyst as large as an orange, the patient, in the interval, having had a miscarriage, and also borne a healthy child at term after a difficult labour with a transverse presentation. Mr. Ryall had assisted him at the second operation, and they had found the uterus attached to the abdominal wall by a ligamentous band about an inch and a half long, similar to those depicted by Howard Kelly. Few would now perform ventro-fixation on a woman capable of child-bearing; suspension was a different matter, but the operation just referred to by Dr. Garrett Anderson and well known as Howard Kelly's, was not in his (Dr. Macnaughton-Jones) opinion, theoretically as perfect as Olshausen's method of doubling the round ligaments and attaching them to the subperitoneal fascia. In the last few operations he had performed, he had looped up the broad ligament about an inch from the uterus at either side, anchoring each ligament to the peritoneum and subperitoneal fascia. One end of each suture was left long, and this was used for closing the peritoneum. He employed cumol gut.

Dr. F. A. PURCELL mentioned that he had at present in hospital a woman whose uterus he had fixed to the abdominal wall by passing silk sutures through the round ligaments on both sides. The uterus was suspended in good position, but she had developed a sinus or abscess which would not heal, and he had not as yet been able to find and extract the ligatures.

Mr. JESSETT, in reply, thought the case he had described demonstrated that ventral suspension would be of very little use in prolapse of the uterus; that the prolapse had not recurred was due to the fact that the utero-sacral liga-

ments had been shortened at the time of the operation. Mr. Greig Smith had shown that firm union could not be obtained between two peritoneal surfaces, and to perform ventro-fixation properly it was indispensable to fix the uterus to the muscular tissue of the abdominal wall.

The PRESIDENT (Dr. Heywood Smith) then delivered his

INAUGURAL ADDRESS.

It is, Gentlemen, at once my duty and pleasure, in assuming the Presidential Chair of this Society, to thank the Fellows for the honour they have done me in electing me to fill this important post, and to express the hope that my year of office may be marked by still further real progress in the work of the Society, and that my conduct in the Chair may justify the confidence you have reposed in me, and tend to maintain the high position that the Society holds among kindred Societies in the profession.

In considering what subject I should bring before you to-night, at the same time profitable and interesting, I thought, inasmuch as I had the honour of convening the meeting out of which the Society was constituted, that it might not prove unacceptable if I were to give you a sketch of how the Society took its inception, and then to pass in review the work it has done during the past eighteen years, with the view of demonstrating what progress in gynæcology has been due to the honest work of its Fellows, and perhaps to indicate shortly the lines of further investigation and research, whereby we may justify to an expectant profession the *raison d'être* of our existence.

For some years during the seventies in the last century, after the science and art of gynæcology had begun to be established as a definite and long neglected speciality, it was felt that there did not exist any Society whose main object was the cultivation of knowledge and the advancement of treatment, operative and otherwise, in diseases of women.

It is true there existed a Society whose chief rôle was concerned in the furtherance of the *Ars Obstetrica*, but the work of that Society was at the time chiefly limited to the reading of academic papers and discussions thereon, while the exhibition of specimens and the reading of cases formed but a limited portion of the time at the disposal of the Society at their meetings; the object of the Society being to further the knowledge and practice of obstetrics, and in so doing to help general practitioners in the exercise of that branch of their profession, and thereby to benefit the public by defending them from the accidents and complications that might accrue in the course of that important branch.

At that time I used to see a good deal of Dr. Palfrey, Obstetric Physician to the London Hospital, Dr. Meadows, who was my colleague at the Hospital for Women, and others, and in the course of many a friendly conversation it was borne in upon us that the time had arrived when the foundation of a new Society was advisable, nay, called for, which should be an exponent of a speciality that had only had a separate existence for about a generation.

We considered that for the furtherance of our object the Society should possess certain features which were hitherto not so pronounced in the then-existing Societies, that is: (1) That the exhibition of specimens and the reading of cases should have precedence of formal papers, for we felt that gynæcology, both as a science and an art, would best be forwarded by friendly competition in the exercise of the art, and the discussion that would arise on the exhibition of these "Chips from the Workshop," would enhance the science that we sought to lift to a still higher level. We felt sure that such discussions would have a more practical issue than the methods usually pursued in other Societies. (2) We were determined to "run" and maintain a Journal which should be representative of cosmopolitan gynæcology, and not as in the case of many other Societies be merely a record of the proceed-

ings of the Society. This we have done ; and while a Journal, *The Obstetric Journal*, was started, yet died after it had accomplished eight volumes, ours, the BRITISH GYNÆCOLOGICAL JOURNAL, has continued its uninterrupted course, and its eighteenth volume will shortly be issued.

To show how great was the need of the new Society and how our methods found favour as supplying a real want, the meetings at "another place" became more practical, and their Journal and its method of issue was gradually approximated to ours ; moreover, owing to the spread of the knowledge and practice of gynæcology it has been deemed advisable by some writers to start a new Journal of obstetrics and gynæcology, so abundant is the material continually coming to hand, although our Journal is distinguished above all other cognate productions as being eminently practical in its teaching and widely cosmopolitan in the varied information it sets before its readers. Of it I shall have somewhat to say further on.

Such being the state of feeling among the leading gynæcologists of that day, in June, 1884, I sat down and drew up a plan and rules for the formation of a Gynæcological Society, and having done so put them aside, and in the autumn went with the British Association for the Advancement of Science to the meeting at Montreal. When over there I saw that in their medical societies the Canadians and Americans were pushing on to keep abreast of the time ; so on my return I laid my scheme before Dr. Meadows, Dr. Routh, and others, and a meeting was called together on December 27, 1884, over which Dr. Routh presided, which was attended by a large number of representative men in our profession, and at which the British Gynæcological Society was launched, Dr. Barnes giving the project his able support. He kindly consented to be our Honorary President, a post that we are glad to say he still holds, although our first President, Dr. Meadows, and about eight others who were elected to office on that day have passed

away : he whose unworthy successor I am in the Chair to-day, Sir Halliday Croom, was on the first Council.

I will now proceed to a *resumé* of the work done by the Society. In order to obtain this information it has been necessary to institute a research through all the eighteen volumes of our Journal, and to render the material thus collated more useful in a record of our work I have arranged it under the heads of (1) Papers read before the Society ; (2) cases narrated ; (3) instruments, photographs, drawings and sections ; (4) original communications made to the Journal ; and (5) specimens exhibited.

Including the meeting of last month the Society has held 234 meetings, of which 40, or 17·09 per cent., were devoted solely to the exhibition of specimens or the reading of cases.

The number of papers read before the Society was 148. Of these 21 were upon various subjects of gynæcological surgery, 14 on ovarian subjects, 12 on menstruation, 12 on gynæcological treatment, 11 on misplacements, 10 on obstetrics, 10 on fibroids, 9 on ectopic gestation, 6 on cancer, 6 on general diseases in their relation to gynæcology, 4 on the after-effects of cœliotomy, 3 severally, on the perineum, sexual subjects, vagina, hysterectomy, deciduoma malignum, and hysteria ; 2 each on pelvic abscess, uterine hæmorrhage, and bacteriology, and 1 each on cancer of the mamma, syphilis, gonorrhœal salpingitis, endometritis, hæmatocele, anæsthetics, the zoological position of the endometrium, on uterus bicornis, and the Midwives' Bill.

Of cases narrated without the exhibition of specimens there were 49. Of these 10 related to ectopic gestation, one patient being the subject of this abnormality twice ; 5 were puerperal, 4 cases of inversion, and 4 of fæcal fistula ; 3 were obstetrical, 3 were cases of vaginal hysterectomy for cancer, there were 2 each of extra-peritoneal cysts, the electric treatment of fibroids, uterus bicornis, and absence of the internal genitalia, and 1 each of the following : fibroid

with utero-gestation, ovary with twisted pedicle, epilepsy, retroversion of the gravid uterus, ovariectomy at 72 years of age—one case has been shown of an ovarian cyst removed from a patient aged 82—renal calculi, ovariectomy for chronic disease, hermaphrodite, hæmatosalpinx, and hysterectomy for prolapsus. There has been also brought before us a case of twins after the removal of the adnexa of one side and resection of the ovary, and one where there were two pregnancies after removal of the adnexa of one side and ventro-fixation of the uterus.

Of instruments exhibited 16 were uterine, 6 varieties of specula, 6 electrical apparatus, 4 needles, sutures, &c. ; 3 related to midwifery ; 2 were pessaries ; in all 37.

Of drawings, photographs and sections, 5 were of cancer, 2 of deciduoma malignum, and 1 each of bacilli, fatty heart, ectopic gestation, pyosalpinx and fibroids.

In the volumes of the *Journal* there have appeared 62 original communications, 7 on general gynæcological themes, as treatment, &c. ; 5 on vaginal hysterectomy ; 4 each on hysterectomy for fibroids, obstetrical subjects and ovarian diseases ; 3 each on ectopic gestation, anæsthetics, cancer, fibroids (biological) and deciduoma malignum ; 2 each on cœliotomy, sepsis, and puerperal cases, and 1 each on menstruation, sexual matters, symphyseotomy, rectocele, ventro-fixation of the uterus, vaginal fixation of the uterus, registration of still-births, Porro's operation, prolapsus uteri, on the microscope in diagnosis, hydatids, serum therapy, inversion, electricity in gynæcology, on the cinematograph as illustrating operations, Kraurosis and salpingitis. But by far the larger part of the work done by the Society, work that gave rise to important discussions, and by means of which gynæcology has been so greatly advanced during the past eighteen years, consisted in the exhibition of specimens, nearly all of which were brought from operations, recent or otherwise, very few being the result of necropsies.

In all there were exhibited 738 specimens, of these 243, or 32·9 per cent. were fibroids of the uterus.

Among this large number there occurred several with complications: 6 were fibroids complicated with pregnancy, in 1 case necessitating Cæsarean section, in 7 cancer was developed, 14 were fibro-cysts, in 4 there was prolapsus and in 1 inversion.

It is interesting also to note the various methods of operating for the removal of fibroids, in 28 it was effected by sub-peritoneal hysterectomy, in 19 by so-called panhysterectomy, in 8 by vaginal hysterectomy, in 4 enucleation was performed, 2 cases were operated upon by morcellement, and 2 by Doyen's method. Since the year 1894-5 the prevailing operation has been sub-peritoneal hysterectomy, before that clamps or the serre-nœud were invariably used.

Among the specimens were 140 ovarian, or nearly 19 per cent. Of these 140, 26 were dermoid tumours, or 18·5 per cent.—this comparatively large proportion is probably due to the fact that such tumours are accounted more rare, and that simple ovarian cysts are now but seldom brought before the Society.

Ovarian tumours, the seat of sarcoma or papilloma, amounted to 19, and there were 14 cases of ovarian cyst with twisted pedicle. There was one case exhibited of a dermoid cyst with twisted pedicle in which pregnancy coexisted, and in this case the pregnancy went on to term. In 9 cases the appendages were removed for chronic disease, in 7 for sclerosis, in 3 for fibroids abdominally, and in 2 by vaginal cœliotomy, in 1 for hystero-epilepsy, in 1 for abscess and in 1 for calcareous degeneration. There were also exhibited 12 parovarian cysts, but none since 1895.

The result of operations on the oviducts exhibited were 27 of pyosalpinx, 10 of hydrosalpinx, 8 of hæmatosalpinx, and for other conditions 7, of which in one case there was occlusion; these are where operations were undertaken for disease of the oviducts, no reference being made to those

cases where the oviducts were removed in the course of operations on ovarian tumours or fibroids.

There were exhibited 36 specimens of ectopic gestation, mainly tubal, and removed by abdominal cœliotomy; 1 was removed unruptured and 1 by vaginal cœliotomy.

There were 4 cases of Porro's operation, 7 cases of broad ligament cysts and 3 hermaphrodites.

There were in all 73 specimens of cancer exhibited, and I have included in the generic name cancer, all the various manifestations of malignant disease. Of these 46, or 64·3 per cent., were cancer of the uterus removed either *per abdomen* or *per vaginam*. In 11 cases the cervix was amputated, 7 had been treated with chloride of zinc, in one case there was pregnancy coexisting with cancer of the cervix, and there were 2 cases of fibroid with cancerous degeneration. Besides these uterine cases there were 4 of the mamma, 1 of the clitoris and 1 of the vagina.

There were exhibited 9 bladder cases, of which 3 were cancerous, 3 contained calculi, 2 had foreign bodies in them, and in 1 case there was a perforating ulcer.

Of kidney diseases there were 16 cases shown; 6 of renal calculi, 5 of hydronephrosis, 2 of pyonephrosis, 2 cases of puerperal albuminuria, and 1 of cancer. There were 4 cases of cyst of the vulva and 1 of hydatids.

Besides these classified specimens there were shown a few exhibits that could not well be placed in any of the above classes, viz., a large fir cone removed from the vagina of a patient by a midwife; a buckle pessary also removed from the vagina where it had been for five years; there was one case of ruptured uterus and one of uterus bicornis.

Two interesting cases were brought forward in which hysterectomy had to be performed, one by cœliotomy, one *per vaginam*, because of hæmorrhage persisting after the ovaries and tubes had been removed; in one case a scrap of ovarian tissue had been left behind, and in the other a portion of the oviduct.

I must not omit to mention that a most successful

conversazione was held in February, 1898, by the kind invitation of Dr. Macnaughton-Jones, attended by over 100 Fellows, at which were exhibited 18 instruments of various kinds, 13 specimens of drugs and 52 microscopic sections, of which 6 were of oviducts, 8 of the ovaries, 27 uterine, 4 vulval, 1 renal and 5 of various bacilli.

On May 10, 1885, Dr. Meadows gave a brilliant and successful *Conversazione* to the Fellows of the Society. The Marlborough Rooms were filled with works of art, pictures, instruments, scientific apparatus and specimens. Dr. Meadows showed a magnificent collection of specimens under the microscope illustrating ovulation, the structure of the uterus, ovaries and placenta. There was an interesting collection of special drugs, as well as a beautiful collection of ancient Japanese arms and metal work, and of arms captured at Suakim, lent by Mr. Ernest Hart.

Taking into regard the work done by the Society, as indicated by the various specimens exhibited, it is worthy of remark that of the ovarian tumours by far the larger number were shown during the earlier years of our existence; this is doubtless owing to the complete establishment of ovariectomy as an operation of necessity, and that it is no longer accounted permissible to leave an ovarian tumour until it has developed to an inconvenient or dangerous size before having recourse to operation; and so it has come about that it is only the rarer forms of ovarian tumours that are considered important enough to bring before the Society. But as an indication of the line where the Society has been without doubt the pioneer of a great advance in abdominal surgery, we have only to look at the large number of fibrous tumours of the uterus (243) that have been exhibited; and not only so, but we have witnessed, and I think we may congratulate ourselves on having been the leaders in this great advancement, the establishment of the intra-abdominal or subperitoneal treatment of the stump in hysterectomy, and the banishment of the clamp

and the *serre-nœud* to the limbo of extinct and dangerous proceedings.

Perhaps I may be allowed here to quote from the Valedictory Address of our late President, Sir Halliday Croom, delivered to us at our last meeting, when he said that there was more to be learnt from the exhibition of and discussion on specimens than from mere papers ; and also, that gynæcology had made most progress of all the specialities, and that this Society had contributed to that progress no inconsiderable share.

It may not be out of place to quote also here a remarkable passage in the preface of a book recently published, and which seems to be thoroughly up-to-date and likely to prove eminently useful as a book of reference. I refer to "The Practitioner's Guide," by Dr. Walter Carr, Mr. Pickering Pick, Mr. Alban Doran, and Dr. Andrew Duncan. It is in the form of a dictionary or rather of an encyclopædia and was published only last year. In the preface the authors say :—

"It will be noticed that the articles on gynæcology occupy relatively a large space, and the diseases of women are more fully described than those of medicine and surgery. It was felt that of late years great advances have been made in our knowledge of these conditions, and that until recently less attention was paid to them in our medical schools than to the ordinary diseases of medicine and surgery. It was therefore thought advisable to devote a considerable space to their description in order to supply the practitioner with information concerning subjects on which much light has been shed by the researches and experience of specialists in these diseases of the present day : subjects which form a considerable and important part of the work of medical men in general practice."

Sir Halliday Croom, in his address last month, also impressed upon us that there was medical gynæcology as well as surgical gynæcology. Now while we must all acknowledge the truth of this *dictum*, yet the enormous mass of

material laid before us in actual specimens of tumours of all sorts, both uterine and ovarian, bears witness to the great preponderance of surgery as *the* means to the end of relief from disease over the slower and in some cases unsatisfactory methods of medicinal procedure which we may and do distinguish by the name of "treatment." But in thus weighing the advantages or making any comparison between medicine and surgery in gynæcology, we must not lose sight of the fact that surgery more often has something to show as the result of its labours, some "chips from the workshop," as I have ventured to call them; whereas medical treatment—and I am not quite sure whether in a large number of cases medicinal treatment is not combined with methods of so-called minor surgery in the way of applications, &c.—has nothing short of the whole patient that could be actually exhibited. Moreover, whereas in other kindred Societies, embracing other specialities, patients are often shown to advantage as exhibiting the success, it may be, of some particular method of treatment, yet in gynæcology such an exhibition in the majority of cases would not only be inconvenient but well nigh impossible. Yet I would venture to express a hope, which I put forward as a suggestion, that we might with great profit devote an evening occasionally to the narration of cases, clinical evenings we might call them, when methods of medicinal treatment specially might be brought forward and discussed—nay more, I think it might be profitable to bring forward cases presenting certain difficulties, even during the time that they were under treatment, in order that the combined wisdom of the Fellows might be brought to bear on the subject; it might be to the manifest advantage of the patient.

These clinical evenings might be made very profitable and they would at all events have the effect of encouraging those of our Fellows who are engaged in general practice to bring forward their cases to a sort of consultation, as it were, instead of being discouraged therefrom, as I fear is

often the case at present, because they are not able to display some striking abnormality to the astonished gaze of their admiring fellow-Fellows.

And inasmuch as the success or its reverse depends in gynæcology, as in other branches of medicine, on the quality of diagnosis, and there occur not unfrequently situations where differential diagnosis is difficult or even beyond our present powers of determination, such free discussion of cases laid before the Society for diagnosis and perhaps for direction in treatment would be productive of a vast amount of good.

And here perhaps I may be permitted, while on this subject, to quote the latter part of the Bradshaw Lecture delivered before the Royal College of Physicians on November 4, 1902, by Dr. Cullingworth, who was honoured by the College as being the first gynæcologist that had been appointed to deliver that lecture. He says: "It would, I think, scarcely be an exaggeration to say that, whereas the characteristic ambition of the surgeon is to attain perfection of treatment, the characteristic ambition of the physician is to attain perfection of diagnosis. The developments of gynæcology in a surgical direction have led many to doubt whether the time is not approaching when gynæcology should be regarded as a special branch of surgery rather than of medicine. . . . One thing I should like to say and it is this, namely, that if there is in British gynæcology any of that striving after perfection of diagnosis of which I have just spoken, it is traceable in my opinion to the traditional association of gynæcology with medicine. The instinct of the surgeon, I say it in no spirit of disparagement, is, at any rate in gynæcological work, to be satisfied with just so much of a diagnosis as will enable him to decide upon a line of treatment. With the refinements of diagnosis he does not greatly concern himself. The physician, on the contrary, trained and accustomed to the patient solving of difficult diagnosis problems, is not content with what I may call a mere utilitarian diagnosis. He recognises

that in scientific medicine the first essential is accuracy of diagnosis, and that until an accurate diagnosis has been made all treatment must be haphazard and unscientific. Those have been the best clinical physicians who have held this opinion and have systematically acted upon it, availing themselves of every opportunity, whether in the *post-mortem* room or the operating theatre, of ascertaining how far their diagnosis is borne out by facts. If gynæcology is to advance in a scientific direction, this is the spirit, it seems to me, in which its work must be carried on. Hence I should view any step toward the severance of gynæcology from medicine with very great misgiving. That gynæcology is becoming more surgical is very true. It is inevitable that it should be so. But that is all the more reason why medicine should still keep a hold upon it, to exercise a wholesome restraint upon its surgical enthusiasm, and to continue to inspire it with that reverence for accuracy of diagnosis which otherwise it might be apt to lose."

These are weighty words, and may tend to steady the pendulum and keep its range, as far as gynæcology is concerned, from a too wide excursion towards either medicine or surgery.

In 1885, the first year of the Society's work, there was appointed a Committee to collect evidence and report upon the subject of menstruation. The Council voted a grant of £50 towards the laboratory and other expenses incidental to the investigation. So far as I am aware this report has never been sent in and I suppose the £50 was never drawn upon, and I think it is a matter of great regret as well as astonishment that after nearly 6,000 years of the world's history so little is known of the physiology of menstruation and its relation to ovulation. I would venture to hope that the Society will at no distant time again take the matter up, and, in the light of Mr. Bland-Sutton's able paper on "Menstruation in Monkeys," institute a thorough investigation on this very important subject,

which, although it might be attended with considerable expense, would be fraught with the utmost possible benefit to the community at large.

Although I suppose it is not accounted "good form" to praise one's own children, yet I cannot refrain from offering my tribute of praise to the able conduct of our Journal, and in doing so I must couple my remarks with the name of Dr. J. J. Macan, our very able and indefatigable present Editor. From the very first the BRITISH GYNÆCOLOGICAL JOURNAL has been not merely a Journal of the proceedings of the Society, but has also been a record of the work of kindred Societies at home and abroad, and has contained notices of gynæcology from near and afar, besides containing reviews of all important gynæcological works, until now it has grown to be one of the most useful and important journals of the subject in the English language, containing as it does a large number of original communications from all parts of the world, a *precis* of gynæcology, notes of any advance in our speciality that does not happen to have been brought definitely before our Society, and is becoming more and more useful, inasmuch as it becomes more and more cosmopolitan; and I am not going too far if I say that it has made great strides in the hands of our present Editor, who spares no pains and gives an infinity of his time to the production of many articles of great value from his own facile pen, which his characteristic modesty prevents him from attesting with his signature.

To glance then roughly at our work accomplished during the past eighteen years, I would draw special attention to (1) the number of meetings (40) where no paper was read, but the interest was maintained by the reading of cases or the exhibition of specimens and the practical discussions that followed; (2) the manifestly important change that has taken place in the treatment of the pedicle in the removal of the uterus for myomata; (3) the light that has been thrown on ectopic (tubal) pregnancy by the reading of 9 papers on the subject, the narration of 10 cases, 3 original communi-

cations to the Journal, and 36 actual specimens shown, the removal of which undoubtedly saved many lives; and (4) the running of a Journal that has already made its mark in the world of literature, and will I trust maintain its high standard as long as the Society lasts.

Our American brothers, recognising the importance of the growing mass of material that gynæcology is daily producing, have recently felt constrained to add to their *Journal of Obstetrics* a monthly *Journal of Gynæcology*.

We may now ask ourselves what lessons have we learnt or ought to have learnt from the vast amount of material that has been brought under our cognisance during our existence as a Society? I think in the first place that it is incumbent on each Fellow to bring before the Society any case that he may consider may have any influence in determining any special line of treatment, whether operative or otherwise; for we never can know what important results may accrue from so doing, or what further light may be thrown on diagnosis or treatment, what further advance may be made towards shortening disease or the saving of human life; some apparently casual remark let fall during the discussion on some, may be, trivial case, may be fraught with untold benefit to some suffering sister. Secondly, where we can, to let our work be systematic and progressive; and by this I mean that we should occasionally take up some special subject and follow it out until we have accomplished some definite and special end, as, for instance, where we have established the advantage, to be followed, I trust, by no retrogression, of the intro-abdominal treatment of the stump in hysterectomy. Thirdly, that there is yet a large field of unexplored territory to engage our attention and call for our diligent research, as, for instance, the etiology of cancer with the view to the discovery of the best method of treating it, and lastly, to encourage our Fellows engaged in general practice to bring forward cases for discussion, for it is not always that the greatest light

has been shed on any particular disease by the exhibition of the widest deviation from its ordinary manifestation.

In consonance with our principles the Society has decided upon the inception of a plan for the better provision and standardising of gynæcological nurses.

It has long been felt by the profession that there exists no reliable criterion by which we can test the efficiency of nurses, especially those giving themselves to gynæcology.

It is true that nurses obtain a certificate from the lying-in hospitals that they have been under training for some specified time, and very occasionally a nurse may get a certificate to the same effect from some special Hospital for Women, but there is no means whereby the efficiency of a nurse is tested so as to differentiate the capabilities of one nurse from another.

Our Society now proposes to attempt to alter this anomalous state of things. A committee appointed by your Council have gone thoroughly into the question, coming into touch with nurses themselves at a Conference with delegates from the Matrons' Council, and I am glad to be able to tell you that the Council has decided to institute at once examinations, and to grant certificates in monthly and gynæcological nursing. The chief feature of this movement is that no woman will be eligible for the Society's examination unless she has had three years' previous training in hospital work. This will prevent the market being flooded with so-called nurses who trade upon the public with inadequate qualifications.

A Board of Examiners has been appointed, and the examinations of the Society will be held once a quarter. *Examiners:* The President (*ex-officio*), Sir Halliday Croom (Edinburgh); Dr. Bedford Fenwick (London); Dr. Macnaughton-Jones (London); Dr. Mansell-Moullin (London); Dr. Newnham (Bristol); Dr. Purefoy (Dublin); Dr. Ranken Lyle (Newcastle).

By means of this undertaking medical practitioners on employing such certificated nurses will have a guarantee

that they are being assisted by women well qualified for their work, of good character, and amenable to the rules of professional ethics.

The Council is convinced that nurses will welcome the new arrangement and will gladly come forward for the examination in order to place themselves on a better footing both with the medical profession and the public.

We confidently trust the Fellows will lend their aid to make this effort of the Society a success.

And now, Gentlemen, I must bring these remarks to a close—I trust I have not wearied you with so many statistics of the various subjects of our work ; but before sitting down I would just indicate a few of the lines on which we still need information and which I trust some of the Fellows of the Society will take up and prosecute, namely, (1) The physiology of menstruation ; (2) the early diagnosis of tubal pregnancy, with the view of the prophylaxis of rupture ; (3) the propriety or otherwise of the removal of the cervix *only* in cancer of that portion of the uterus ; (4) the relative advantages of subperitoneal or so-called pan-hysterectomy ; and (5) whether it is advisable in hysterectomy to remove one ovary, or both, or neither.

In the following of the speciality of gynæcology we have a serious duty to perform towards the gentle and tender and, I may say, the chiefly suffering sex, the mothers of “our sons to be ;” let us see that we leave no stone unturned, relax no effort, in our endeavours to diminish the totality of pain, to antagonise the inroads of disease and to ward off, for as long as possible, the final assault of death.

Dr. C. H. F. ROUTH said that looking at the amount of useful work the Society had been able to do, and the advantage it had been to all who had joined it, it was hard to realise the contempt that was formerly shown to gynæcology, and those who practised it, by other members of the medical profession. He could well remember the time when an eminent man spoke of gynæcologists at a well-

known medical society, as persons to be avoided, and exhibited a uterine sound as an instrument fit "to frighten a Kaffir." He even spoke of an ovariectomy performed at the Samaritan Hospital by Mr., afterwards Sir, Spencer Wells, as "a horrible sight." But gynæcology had won its way to the infinite advantage of womenkind and their offspring. There had been great improvement in nursing; he could remember that formerly a patient, so far from having a bath when admitted to a hospital, was not even washed before operation, which was performed, as a rule, in the patient's bed. There was, however, room for further improvement, and he thought that the inauguration of examinations and granting certificates would assist in bringing it about, and be of great advantage. He proposed that the thanks of the Society be given to the President for his able address.

Mr. BOWREMAN JESSETT seconded the motion. The interesting epitome the President had given them of the work of the Society during the eighteen years of its existence, must have entailed an immense amount of arduous work, for which the Fellows were very grateful; they were to be congratulated upon having Dr. Heywood Smith in the Chair, and he had no doubt that his year of office would be a very prosperous one for the Society.

Dr. MACNAUGHTON-JONES said that the President had, with characteristic modesty, omitted any mention of his own influence upon the development of hysterectomy, but it was well known, not only in the Society, but on the continent and in America, that Dr. Heywood Smith had been the first in the United Kingdom to advocate the sub-peritoneal treatment of the stump in the removal of the uterus. Not only had Dr. Heywood Smith been a prime mover in the foundation of the Society, but there had not been any discussion of importance at any of its meetings in which he had not taken part. His sincere personal regard made it a great pleasure to him to support the motion.

The British Gynaecological Society.

Dr. Cr.
 RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING DECEMBER 31, 1902.

Dr.	£	s.	d.	£	s.	d.	Cr.
To Balance brought forward December 31, 1901	60	6	1	
" Fellows' Subscriptions—							
195 at 21s.	204	15	0	
42 " 42s.	88	4	0	
5 " 63s.	15	15	0	
5 " 84s.	21	0	0	
1 " 21s. 2d.	1	1	2	
3 " 21s. 6d.	3	4	6	
1 " 20s.	1	0	0	
1 " 20s. 6d.	1	0	6	
1 " 20s. 11d.	1	0	11	
1 " 22s.	1	2	0	
1 " 40s. 9d.	2	0	9	
1 " 30s.	1	10	0	
" From Dinner, 1 Subscription	34	13	10	
Balance	0	10	6	
" Advertisements in Journal, per Samson Clarke and Co.	3	10	0	
" Dividends on Investments—							
Caledonian Railway	2	15	5	
Grand Trunk Railway	4	0	6	
" Unpaid Subscriptions from January 1, 1899	0	3	10	
Balance at Bank	10	3	0	
Unpaid Subscriptions	10	6	10	
1899	210	0	0	
				<u>£629</u>	<u>2</u>	<u>8</u>	
By Bale and Sons for Journal and Notices of Meetings	237	6	7	
" Bale and Sons for Dinner Notices	2	14	6	
" Dr. Swanton for Postages in 1902 and not paid into Bank till 1903	240	1	1	
" Honorarium to Editor	1	2	0	
" Reporting, &c.	52	10	0	
" Typewriting Assistance and Repairs...	21	0	0	
" Postages	5	5	0	
" Rent	3	5	0	
" Microscopes	52	10	0	
" Tapson (porter)	0	13	0	
" Sharrow (printer)	2	5	0	
" Dr. Whittle, for Subscription paid by Bank after his resignation	2	7	6	
" James Stewart and Co., for Balance on 30s. cheque sent for Dr. Coates-Cole Subscription	1	1	0	
" Petty Cash (Treasurer's Postages, Typewriting, and Tips to Attendants at Hanover Square)	0	9	0	
" Commission on Cheque	4	3	3	
" Foreign Postal Order returned	0	9	7	
" In hand	1	1	0	
" Balance at Bank	3	3	3	
" Unpaid Subscriptions	27	17	0	
				<u>210</u>	<u>0</u>	<u>0</u>	
				<u>£629</u>	<u>2</u>	<u>8</u>	

We hereby certify that we have examined the above account and the counterfoil receipt books and vouchers in connection therewith and find it to be correct. And we also certify that the Society hold the following Securities: £270 Grand Trunk Railway 4% Debenture Stock, and £5 Caledonian Railway 4% Debenture Stock, in the possession of the London County Bank, Kensington Branch. The said two certificates being presented to us.

F. A. PURCELL, M.D.

Dr. Heywood Smith's year of office would, he was sure, be a source of pride to the Society.

The motion was then put by the last speaker and carried with acclamation.

Dr. WILLIAM TRAVERS, Treasurer of the Society, submitted his balance sheet for the year 1902, and explained that the reason it had not been laid before the annual meeting on January 8, was the impossibility of having it audited before that early date.

The PRESIDENT requested Dr. Swanton, the Secretary, to read the balance sheet, and this having been done,

Dr. BEDFORD FENWICK proposed that the balance sheet as read be adopted, and that the cordial thanks of the Society be given to Dr. Travers for the very able way in which he had conducted the financial affairs of the Society during the past year.

Dr. W. SLIMON seconded the motion, which after some remarks from the auditors, Dr. F. A. PURCELL and Dr. C. H. BENNETT, and by Mr. JESSETT, was carried unanimously, and Dr. TRAVERS briefly replied.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 12, 1903.

DR. HEYWOOD SMITH, PRESIDENT, IN THE CHAIR.

Dr. J. J. MACAN said that he had been asked to invite the assistance of the Fellows in the investigation by the Manchester Clinical Society into the causes of eclampsia. The request had not reached him in time for him to mention the matter in the February number of the *Journal*, but Mr. Howson Ray had promised to keep him informed as to the progress made, and it would be reported in the May number. Already as appeared in a letter in the *Medical Press and Circular* of the 11th, the deficient elimination of urea had proved to be an important element in the etiology of the disease.

SPECIMENS.

NOTES ON A CASE OF BILATERAL HÆMATO-SALPINX. By WILLIAM DUNCAN, M.D., M.R.C.P., F.R.C.S., Obstetric Physician to the Middlesex Hospital, &c.

The patient from whom the specimens were removed had the following history :—

A. T., aged 29, married woman with one child, 8 years old ; her labour was easy ; has had no miscarriages. Her catamenia began at 16 ; were quite regular and lasted five days—normal in amount and painless. She has never missed a period. Two years ago patient began to have sudden attacks of pain in the lower abdomen, accompanied by giddiness and sometimes by vomiting. At first the pain was not sufficient to make her lay up, but latterly

the attacks have become more severe, and on the last three occasions she has taken to her bed.

Examination under Anæsthesia, February 16, 1903.—A swelling can be felt on deep palpation at the right lower abdomen. *Per vaginam*: A definite, firm, rounded swelling can be felt about the size of an orange in the right fornix, and a much smaller one on the left side. The uterus is normal in size and position and is mobile.

Abdominal Section, February 18, 1903.—The specimens shown were removed without any difficulty, but in extracting that from the left side, the tube, which was about the size of an unshelled walnut, burst, and dark liquid blood escaped. The patient made an uninterrupted recovery.

The specimens were hardened in formalin, and on being divided longitudinally the following conditions were observed:—

(a) Right tube and ovary are joined together and are distended with consolidated blood (probably the result of the formalin). The ovary is about the size of a peeled Tangerine orange, with a firm outer wall. The Fallopian tube is distended to the thickness of a large banana, and also has a thick outer wall.

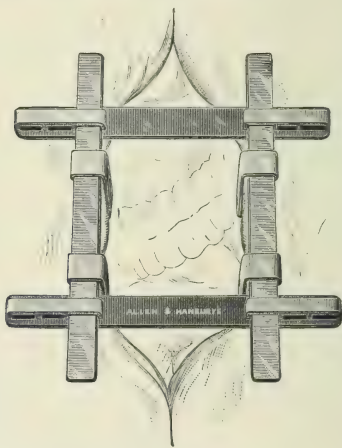
(b) The left ovary is normal in size, but consists of one cyst, the colloid contents of which are hardened into an opaque substance like the white of egg. The left Fallopian tube is thin-walled and contains a very little blood, the remains of what was left after the tube ruptured during removal.

Remarks by Dr. DUNCAN: In the great majority of cases hæmato-salpinx, as is well known, is due to hæmorrhage into a tubal gestation, and although the right tumour on its removal looked very like a tubal gestation, on section there is no appearance of such a condition; besides which there is a complete absence of history leading one to suspect its possibility. Then, again, the fact of the hæmato-salpinx being bilateral, and that the right ovary was converted

into a blood cyst, points more likely to the condition being the result of an inflammation of both Fallopian tubes.

In response to a suggestion of the President, who thought the specimen required further investigation, Dr. Duncan undertook to have it carefully examined and to report the result to the Society.

Dr. J. S. MACCORMAC exhibited and demonstrated the method of using a self-retaining retractor he had devised for keeping the edges of the incision apart in abdominal cœliotomy, and read the following note :—



The want of a self-retaining retractor which may be adapted to small or large abdominal incisions has often struck me. To the operator in the "city" with a large staff of assistants at his command this is a matter of little moment, but to the surgeon in the country with perhaps only a single nurse to help him in a cœliotomy, an instrument that will facilitate the due performance of the operation is of service.

The self-retaining retractor which I have designed, and which has been made for me by Messrs. Allen and Hanbury, consists of a metal frame which can be enlarged in either direction to suit the requirements of the operator. On either side are two blades which move along the lateral sides of the frame and which can be adapted to the incision.

The instrument shown will be found useful in suspension operations, but it can be made in larger sizes for cases where more room is required. It may be used with one blade on either side or two may be used, and it will be seen that the second blade may be easily introduced during the progress of the operation, in cases where it is necessary to enlarge the incision.

THE IMPORTANCE OF ATTENTION TO THE MOUTH AND TEETH BEFORE AND AFTER OPERATIONS UPON THE PELVIC VISCERA. By H. MACNAUGHTON-JONES, M.D., M.A.O., F.R.C.S.I.

ANYTHING that is likely to complicate recovery from a pelvic or abdominal operation is worthy of attention. This may appear a truism, yet it is unfortunately the fact that occasionally we have to deplore a fatal result which arises not from some apprehended cause such as an unavoidable surgical calamity or complication, but from trivial oversights or unlooked-for, yet avoidable, accidents or complications which greater forethought or watchfulness might have prevented. It is to the occurrence of such a sequel to a pelvic operation that I desire very briefly to draw attention.

It is well known that even in health a great variety of micro-organisms are found in the buccal cavity, such as the *leptothrix sarcinæ spirilla*, the *pneumococcus of Friedlander*, the *bacterium gingivæ pyogenes*, the *bacterium termo*, the *pseudo-diphtheritic bacillus*, and less frequently the *staphylococcus albus* and *aureus*, the *streptococcus pyogenes*, and the *bacterium coli commune*. This is only part of a list of micro-organisms which, according to Miller,

frequently number a hundred and forty million in an unclean mouth.¹ Fortunately, the old saying is true of all these deleterious organisms—"these fleas have other fleas"—and to this microbial cannibalism we owe the immunity from septic influences under ordinary conditions, rather than to the weak bactericidal effects of the saliva. But we must further remember that these microbes may secrete ferments and produce alkaloids, the same microbe possibly having the property of producing both, and toxic ptomaines may be also formed from these pathogenic organisms. How far the swallowing of such infective germs, if they be not destroyed by the gastric secretion, infects the intestinal tract and indirectly favours septic changes in wounded tissues, especially in those in close proximity to the bowel, we cannot say. That they may and occasionally do so, appears to be certain. That they must directly cause various gastric troubles is equally true. When the general health is affected and the buccal cavity is itself involved by any acute or chronic constitutional disorder, the virulence of such organisms is increased. By disordered states of the stomach, the naso-pharyngeal tract, the teeth, tongue, and buccal mucous membrane, this increase in virulence is likely to be produced. The mouth then becomes a generating microbial incubator, in which fermentive, putrefactive and infective action are rife. The bacterium termo, which we have noticed as being present, is known to be one of the most active agents in bringing about putrefactive changes. The affection pyorrhœa alveolaris, in which a pus pocket forms between the alveolus and the root of the tooth, and which is attended by softening with purulent exudation from beneath the gum, is commonly known to all dental surgeons.

In a valuable series of articles which appeared in 1899,² Mr. Fitzgerald discussed the etiology, pathology and treatment of this affection. Among the predisposing causes, besides syphilis, tubercle and scurvy, he mentions the exhaustion of acute infectious disease, or any other source

of malnutrition. The gingivitis is accompanied by streptococcus invasion and putrefactive organisms, with decayed food remnants, which, with the associated pus, are swallowed, and act locally on the stomach wall, originate gastric fermentation, and initiate processes which are the result of the absorbed toxins generated in the mouth.

A lady who was under my care for recto-vaginal fistula, which was cured by operation, and on whom I subsequently performed amputation of the cervix, consulted me on different occasions for most severe ulcerations of the buccal mucous membrane, and the inside of the lips and tongue. Pseudo-diphtheritic patches, extending deeply into the tissue, and most difficult to heal, recurred from time to time, notwithstanding that I had the teeth attended to and all carious stumps removed. I had two or three bacteriological examinations made of scrapings from the membranous exudations, and each time the staphylococcus and streptococcus were present with other organisms. Recently, though she has been for a few years free from an invasion, she has had another and milder attack on the inside of the lip. At the time of the first attack the sockets of all the incisor teeth were infected; these were attended to by her dentist and peroxide of hydrogen was injected.

The lymphatics of the salivary glands, and those of the mouth communicating with the superficial and deep cervical glands, may carry infective organisms to these latter. Should there, at the same time, be any slight abrasion of the buccal mucous membrane, the infection may thus directly reach the circulation.

In a communication on "Dental Reflexes," made to the *Dental Record* in 1890, in referring to reflex irritation caused by the teeth, I wrote:—"This source of a distant neurosis is hardly kept in view as frequently as it ought to be in the daily practice of the practitioner and dental surgeon. The latter especially must have frequent opportunity of recognising, in carious or otherwise affected teeth,

an explanation of some puzzling disorder which has baffled the therapeutic skill of the physician or the more specialised aid of the specialist." I also referred to gastric disturbance as one consequence of such reflex irritation, and to vaso-motor facial excitations due to pelvic disorders, both uterine and ovarian.

The vascular disturbances due to such vaso-motor excitations, affecting the blood supply of the salivary glands, and causing diminution or increase in the blood pressure in the cervical and facial vessels, may be explained through the constricting and dilating fibres which pass from the spinal cord through the sympathetic cervical ganglia to the carotid arteries and their branches. The connection between the fifth and seventh nerves is also important, the nervous supply of the parotid being from both of these nerves, as well as from the sympathetic plexus of the external carotid; and that of the submaxillary and sublingual glands being likewise from the fifth and sympathetic, the latter having a branch also from the chorda tympani.

I refer to these nervous connections for a reason I shall presently explain.

Dr. Morley, of Michigan, in the December number of *American Gynæcology*, 1902, has reported a case of secondary parotitis following a salpingo-oöphorectomy performed by Dr. Peterson. Here the affection followed a rather severe operation in which there had been an escape of pus into the pelvis. Some secondary wound infection, evidently of a septic character, was shown by foul-smelling pus discharged from the vagina, and also from the re-opened abdominal wound, nine days after operation. In the parotid gland a fluctuating swelling formed, and seventeen days after the operation a purulent collection was opened, which bacteriological examination showed to be due to the staphylococcus pyogenes aureus. Dr. Morley collected the particulars of fifty-one similar cases, forty-four female and seven male. Of these fifty-one, twenty-eight were after ovari-

otomy. In the remaining twenty-three, various operations on the pelvic viscera had been performed, and in thirty-two out of the fifty-one the affection set in from the third to the seventh day. Cases have, however, been recorded as late as the fourteenth day (Bumm and Mörricke). Suppuration did not occur in thirty-one cases. There were thirty-eight recoveries. Pus was present in nine and absent in four of the thirteen fatal cases.

Dr. Morley refers to the two views of the causation of parotitis, viz., (1) That the correlation is due to a sympathetic excitation conveyed through the sympathetic system to the parotid, or (2) to toxines conveyed to the gland from the pelvic viscera by the lymph and blood channels.

Mr. Stephen Paget, who has twice written on the subject of parotitis as a sequel to operative interference, and has collected the particulars of over 100 cases, advocates the neural origin of the affection.

Dr. Morley notices the weakness of each of these theories, neither of which explains why there is a special selective action for the neck organs, or the absence of septicæmia in several cases. As to the neural theory, he says: "It is simply advanced to mask our ignorance of the true cause of the affection." On the other hand, when we consider the numerous communications and extensive distribution of the trigemini, and the sympathetic supply I have referred to, there is not, in my opinion, any occasion for surprise that the organs in the cervical and facial regions should be specially subject to attack. Nor is it essential that the affection should necessarily have a pyloric origin. I cannot but think that parotitis of a septic character and other oral and cervical inflammations following pelvic operations may be better explained by direct infection from the mouth rather than by sympathetic excitation, or the immigration of toxic elements from such distant parts as the pelvic organs. It is worthy of comment that most of the parotid lymphatic vessels pass into the submaxillary glands (Quain),

which also receive the lymphatics from the floor of the mouth as well as the submaxillary and sublingual vessels, while the internal maxillary glands, placed beneath the ramus of the lower jaw, receive the afferent vessels from the roof of the mouth and the soft palate, all the efferent vessels from these glands finding their way into the superficial and deep cervical.

It is only reasonable to expect that the prolonged administration of an anæsthetic, and the performance of an operation which involves some shock to the system and subsequent depression of vital power, is likely to aggravate any pre-existing septic tendency in the mouth, and further, that this infective influence may occasionally involve the ducts which open into it. In some instances the effect of the anæsthetic appears to be worse than that of the operation. Especially is this the case with ether, if the administration be prolonged. The digestive system may then become disturbed, and the tongue rapidly coated and furred; the breath is foul, and eructations follow with nausea. All this affects the recovery of the patient, influencing the feeding, the digestion, the maintenance of health, and the prevention of a septicæmia which arises, not primarily from the operation area, but from the failure of vital power. That septic inroads into an operative tract are frequently the result of vital depression, has been for a long time taught and recognised (Fritsch). In the type of case I allude to, the early indications of danger from such septic infection in the mouth are to be found in the rapid and persistent fouling of the tongue, which is coated with a thick slimy fur and by a peculiarly fœtid breath. On inquiry we may elicit the fact that the patient has suffered from periodical attacks of dyspepsia accompanied by the same symptoms. Or there may be caries of the teeth and old stumps which have been filed down, artificial teeth being worn over them. The administration of ether appears more conducive to the development of this state than that of chloroform, though I have just had a case in which it followed

administration of the latter in a necessarily tedious series of operations of one sitting. That patient has recovered ; but two cases of this nature I have seen end fatally. One was many years since, when the late Mr. G. F. Bailey gave ether for me to a woman advanced in life, for the closure of an extensive recto-vaginal rent which had been endured for many years. A cloaca common to the vagina and rectum existed. The patient bore the operation well, but there was ether vomiting for some thirty-six hours, and the state I have described supervened. The breath became extremely foetid, the tongue more and more loaded, and she gradually passed into a general septic condition, ultimately becoming comatose. Death supervened on the tenth day. Meanwhile the recto-vaginal and perineal wounds had progressed most favourably, and the union, without any supuration, was complete before death. Obviously the septic state did not arise from the wound.

In the second instance, I had performed a perfectly satisfactory hysterectomy on a patient aged 45. The operation was completed without accident. The same train of symptoms set in and continued. Sleeplessness compelled the use of morphia. Vomiting ceased, the bowel was moved sufficiently each day, but the typhoid condition continued, without any pain or rise of temperature to speak of. She died on the ninth day from the operation. There were no abdominal or pelvic symptoms from first to last, no tympanites, nothing to be felt *per vaginam*. The patient did not complain of pain, but was very restless, with a rapid pulse, and any noise in the street disturbed her. She was perfectly conscious up to a few hours before death. The abdominal wound had perfectly healed.

It may be said that parotitis can have no direct relationship to an operation when a patient has absolutely recovered from the latter before the symptoms of the parotitis appear. This may or may not be the case. Given carious teeth and any recent interference with decayed stumps, with a predisposing agency acting through the

circulation or the nervous system, and the consequence may be an attack of parotitis or angina Ludovici. I was called some years since to see a distinguished actress. She had been rehearsing in a theatre of which the air was foul, the drains being out of order, and she was suffering from her teeth at the time and had dental neuralgia of the right side. Suddenly the parotid gland at that side and the submaxillary and sublingual at both sides became swollen ; only with difficulty could the mouth be opened, and the act of swallowing was attended with great pain. The soft palate was pushed down by a swelling in the palato-pharyngeal space at the right side. Fortunately I was just able to feel the swelling through the constricted oral aperture. It was at first very tense and hard, but with repeated hot antiseptic gargling it became softer in about forty-eight hours, and I determined to incise it. Her condition at the time was very critical. I made the incision with a laryngeal bistoury, and enlarged the opening with forceps, evacuating a large quantity of foetid pus, to the great relief of my patient's suffering and of my anxiety. Recovery followed rapidly.

A gentleman had some stumps extracted, and a portion of one remained. In a subsequent effort to remove this the alveolus was splintered, and a sinus remained in the bone, with associated periostitis and gingival swelling. Under treatment this subsided. Shortly after he had an attack of true angina Ludovici. I was summoned a distance to see him. I found the entire neck swollen, and the space between the line of the axilla and face filled. There was the greatest difficulty in swallowing, and the breathing was rather stridulous. The symptoms had come on rather rapidly, there was the greatest distress, and the condition was very alarming. The treatment to which I mainly ascribed the relief afforded to this patient was the application of a large ice poultice, which encircled the neck. This was kept constantly on, and in a few hours the swelling began to subside, and he made a good recovery.

Dr. Barrett, a Fellow of the Society, writes to me as follows :—

“ I lost a case last year—a lady, aged 43—with parotitis and subsequent angina Ludovici, which I believe would never have occurred save that her teeth were in a very neglected condition. The first symptom was pain over the carotid region. Swelling appeared in two days and gradually increased. On the fifth day the neck was completely involved, there was brawny induration, and she died on the morning of the sixth day, from heart failure. She was supposed to be in perfect health the day before her illness.”

Dr. Jardine, another of our Fellows, has kindly sent me short notes of a case in which parotitis followed three days after the evacuation of a fæcal abscess, the result of appendicitis. The parotids of both sides were affected. The patient recovered.

Such cases, of course, prove that parotitis may be, and doubtless is occasionally, a coincidence rather than a sequence of an operation. But even so, with such predisposing influences as the administration of the anæsthetic, the occurrence of shock, lowered vitality and possible upset of the digestive system, it only makes the condition of the mouth at the time of operation a factor in the patient's recovery which we should not overlook.

In the case I am about to refer to I will not occupy time by entering into all the details. It will be sufficient for my purpose to deal with it in outline. The patient consulted me in 1901 for cystocele with vaginal prolapse, and some descent of the uterus. I performed the operations of perinæorrhaphy and anterior and lateral colporrhaphy, taking in the muscular coat of the bladder, with the sutures passed through the anterior wound. I also removed a few large hæmorrhoids by ligature. The operation was performed on the 16th of the month, and everything went on most favourably until the 30th, the temperature never rising above 100° F., and the pulse, as a rule, being below

80. The bowels were freely moved four days after the operation, and the superficial sutures were removed on the eleventh day, when the wounds were quite healed. The catheter was used for the first five days after the operation and the urine was then passed spontaneously. There was no complication whatever, save that during my absence for some days the urine became rather loaded with lithates, and as it was somewhat offensive the bladder was washed out with a boric solution. I left the case doing perfectly well on the eleventh day after operation. The first indication of anything wrong was a note in the nurse's report on the fourteenth day: "Patient complains of face-ache," and the next morning: "Patient has had a bad night, the face being very painful." At the same time there was a slight rise of temperature, from normal to 99.4° on the sixteenth day. I saw her again on the seventeenth day after operation—the *second* of the face attack—and found that she had had considerable pain during the night, and that the right side of the face over the parotid region was swollen. The temperature at the same time had risen to 102° , the highest point it reached during the whole of her illness. The urine was now normal in character and quantity, and the bowel had been regularly relieved. It transpired that before her operation some teeth in the right upper and lower jaws had been giving her trouble, and she had seen a dentist in consequence. It was now clear that we had to deal with a severe attack of parotitis, and this followed the usual course for three or four days. The temperature fell to a degree above normal, and the pulse was but slightly quickened. She was able to take her nourishment well, and close attention was paid to the mouth and teeth, antiseptic washes being used, while constant fomentations were applied to the swelling. On the seventh day of the attack there was but little increase in the swelling. No fluctuation could be detected, and the morning report was that she had had a fairly good night, sleeping at intervals. The same condition continued on the eighth

and ninth days, plenty of support being taken, alternately with stimulants. The swelling had now begun to extend upwards in the direction of the temporal region, and down to the neck. It was still densely hard, and there was a slight discharge from the occluded left auditory meatus. The swelling below the jaw had not increased. The evening temperature on these two days had risen to 101° , the pulse to 98. Liquid nourishment was still well taken, and for the last two days she had been given quinine at regular intervals. There was no change in the character of the swelling, which was of a deep red colour. Feeling now that at all hazards free incisions should be made, I asked Mr. Watson Cheyne to see her with me, which he did that night, and agreed that such a course was the proper one to take—a view confirmed at a subsequent visit next morning. Her temperature and pulse, taken twice during the night, were respectively 98.8° and 74, rising in the morning to 99.4° and 86. I mention this to show that there was not then much constitutional disturbance. The next, the tenth day, the cervical swelling had increased, and the temperature and pulse had risen. The discharge from the ear had also increased, and I feared difficulty in deglutition, and possibly pressure on the larynx. At midday I made two free and deep incisions, one extending through the swelling as far as the articulation of the jaw, and into the glenoid fossa, and a second below the line of the lower jaw, cutting through a deep and dense mass of phlegmonous strangulated tissue. There was but little pus. With a scissors and curette I removed a quantity of the dead tissue, filling the wound with iodoform gauze.

There is nothing else of importance to relate. Little change took place in her condition for the next few days. She took ample nourishment, and retained her sensibility, suffering but little pain. Her temperature remained between 99° and 100° , the pulse, for the second time only during her illness, passing beyond the 100. She sank on the fifteenth day of the attack, notwithstanding the free

administration of nourishment and stimulants, and periodical injections of strychnine.

Reviewing the course of this case, one cannot help feeling that life was possibly lost through not seeing that the teeth and gums were in a healthy state before operation, as, had this been done, the draught from an open window, to which her face-ache was first attributed, might not have led to such a complication.

Though only a limited number of cases of parotitis after operation have been recorded, it does not follow that its occurrence is so uncommon; but parotitis, I consider, is *only one of the evils that may follow from contamination arising out of unhealthy conditions of the mouth and teeth*. A certain proportion of cases in which coeliotomy or some vaginal operation has to be performed run their course evenly and without giving any cause for anxiety, while others in which we least expect trouble make us apprehensive almost from the time of operation. Each additional factor in this disturbance adds to our difficulty and militates against recovery, or, at least, prolongs convalescence. Hence it may happen that early attention to the teeth and buccal cavity may avert some unfavourable sequelæ and materially assist us in combating those troublesome gastric symptoms so commonly following upon these operations.

The disinfectants which I have been in the habit of using for the mouth are permanganate of potash, formalin, peroxide of hydrogen, boracic acid, and sulphurous acid. The one I prefer is a combination of boric acid, formalin, and glycothymolin. The last-named preparation is a very pleasant disinfectant, forming a useful basis for the others I have mentioned. In the gastric complications in which this foetor of the mouth and breath is present, benzonaphthol, given in the form of cachets, I have found most useful, and likewise a periodical small dose of calomel as an intestinal disinfectant.

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- ² "Pyorrhœa Alveolaris." By John Fitzgerald, L.D.S. *Clinical Journal*, 1899, March and April.
- ³ Landois and Stirling's "Textbook on Physiology." 1889. "Text-book on Physiology." J. McKendrick. 1889. Quain's "Anatomy," vol. ii., part 2; vol. iii., part 4.
- ⁴ *Transactions of the Medical Society*, 1887. "Abdominal Section, followed by Parotitis." *Transactions of the Clinical Society*, 1892.

DISCUSSION.

The PRESIDENT said that Dr. Macnaughton-Jones, as an otologist of no mean repute, was able to take a wider view than some who restricted their work to gynæcology, and they were indebted to him for bringing before the Society, for the first time as far as he knew, the importance of including the mouth and teeth in the preparation of a patient for operation. He would like to hear Dr. Macnaughton-Jones' opinion as to whether in the fatal cases death was due to the local septic mischief, or to heart failure from pressure of the swelling on the nerves, as mentioned in regard to one of them. That strange symptom of constriction, the "globus hystericus," so often associated with pelvic trouble, was undoubtedly suggestive of a reflex from the genital organs. It was questionable whether any well-authenticated cases of the relief of dysmenorrhœa by cauterisation of the nasal mucosa justified the acceptance of menstrual points in the inferior turbinated bones of the nose, and reflex connection between that part and the pelvic organs.

Mr. STEPHEN PAGET (a visitor) said that when, many years ago, he collected 101 cases of parotitis after operation or injury, he hardly understood their significance, but he was then struck by the extreme variability of the interval between the injury and the onset of the inflammation of

the parotid. He found that this interval varied from one to fourteen, fifteen, or even twenty-one days ; while in one curious instance in the practice of Mr. Knowsley Thornton, the parotitis occurred on the morning of the day fixed for the operation. It could not, therefore, be supposed that the inflammation was due to any septic organism, introduced at the time of the operation, which afterwards found ground in the parotid gland. Another point that struck him was the absence of general septicæmia or pyæmia ; in only seven of the 101 cases was there any secondary inflammation or suppuration other than that of the parotid. The third point he particularly noticed was that the injury in many cases had been extremely trivial ; parotitis occurred, not only after major operations involving abdominal section, but after the passage of a sound or catheter, the introduction of a pessary, or the giving of an enema, or a kick on the testicle : injuries often so slight as not to upset the patient or confine him, or her, to bed. He could not, therefore, attribute the parotitis, as some had done, to dryness of the mouth after severe operation and a very low diet, and he felt sure that the chief reason for its occurrence was some nervous influence exercised on the parotid gland by the pelvic organs. The view that infection from the mouth might be the cause of parotitis, so ably put before them that evening by Dr. Macnaughton-Jones, received some support from the only *post-mortem* examination he had made : there was some concretion in the duct and a few drops of pus at its entrance into the gland ; but unless there was some antecedent cause, why should the parotid gland be affected ? If the inflammation was due to dryness of the mouth, or foulness of the teeth, or to the inhalation of ether, why should it not occur after other operations as frequently as after operations, injury or disease, very often in themselves quite trivial, affecting the pelvic organs ? Parotitis had been recorded in connection with pregnancy, parturition and menstruation. He believed that the pelvic organs did exercise a nervous

influence upon the parotid glands; indeed, a connection was known to exist between the salivary glands and the reproductive organs in deer.

Dr. J. J. MACAN said that the nervous connection between the nasal mucosa, of which the President had spoken, was practically established, as might be seen in an abstract, in the August number of the *Journal of the Society*, of an article by Cox in the *Brooklyn Medical Journal*, July, 1902. The well-known metastasis of mumps to the testicle, and the case of parotitis following a kick on the testicle mentioned by Mr. Paget, clearly indicated a reflex nervous connection between the parotid and the genital organs.

Dr. WILLIAM DUNCAN said that the Society was indebted to the author of the paper in opening up a new line of thought as regards the causation of parotitis after operations on the female pelvic organs. He (Dr. Duncan) had had a few cases of parotitis following abdominal section; one of these suppurated, but all the patients recovered. Although there had been no symptoms whatever pointing to there being anything wrong in the pelvis after those operations, he was bound to say he had always looked upon the parotitis as septic in character. In the future he would take care to examine carefully into the condition of the mouth in any case of parotitis arising after operation.

Dr. BEDFORD FENWICK said that having last year collected about 150 of his operation cases for another purpose, he noticed that three of them had had parotitis, and all three were cases of abdominal section. In every one of those 150 operations, as was the rule at the Soho Hospital, ether had been administered, and he was sure his colleagues would agree with him that parotitis after operation was a rare occurrence, far rarer than would be expected if the administration of that anæsthetic were as potent a factor in its causation as Dr. Macnaughton-Jones appeared to believe. Persistent vomiting was, he was convinced, frequently due to gastric disturbance set up by swallowing

some of the ether, and patients so affected were soon relieved by being given considerable quantities of hot water, with or without a little bicarbonate of soda; they generally brought up much of the water administered smelling strongly of ether. The great majority of hospital patients had very bad teeth, and if such were a factor in parotitis, he thought that its occurrence after operations of all kinds would be much more common than it is. The cases in which suppuration occurred were the fatal ones, but in such the patients had almost invariably been enfeebled by prolonged and serious illness; in two of his cases in which suppuration occurred, there had been ovarian sarcoma of long standing.

Dr. C. H. BENNETT mentioned an instance of metastasis of mumps to the scrotum in a child after apparent recovery from the primary affection; for persistent vomiting he could strongly recommend raw egg albumen, the white without any of the yolk.

Dr. HUGH WOODS said that while it was the general experience that acute suppurative parotitis was very rare, caries of the teeth with a dirty mouth was, perhaps, the usual condition in hospital patients. The cases mentioned showed that there was a direct connection between the parotid gland and the testicle, and no doubt under certain conditions of the pelvic and sexual organs in women the resistance of the parotid gland might be enfeebled, just as a lowered state of the nerves in one part of the body would affect the vitality of other parts. That the mouth should be made aseptic was most desirable, but would not be an absolute safeguard against parotitis.

Dr. F. A. PURCELL had not met with many cases of parotitis. After a vaginal hysterectomy for cancer the patient, about three weeks after the operation, developed a swelling in the left parotid, which remained persistently hard. He made an exploratory needle puncture and, though there was no actual suppuration, the result was so good that he repeated the puncture after a couple of days

with good effect, and she got well. He had operated upon a large number of cases of cancer of the mouth and tongue in which it was usual to find a very septic condition, yet he had never seen parotitis follow such an operation, some other cause than bad teeth and gums must, in his opinion, be found for post-operative parotitis. He spoke, unfortunately, without having heard Dr. Macnaughton-Jones's paper.

Dr. MACNAUGHTON-JONES, in reply to Dr. Heywood Smith's question, said that death in angina Ludovici had followed from pressure in certain cases; the laryngeal nerves were involved, and also doubtless the inhibitory supply to the heart. Sepsis also was a possible factor. His object was not merely to draw attention to parotitis as a possible consequence of a septic mouth, but to the effects generally of the accumulation of pathogenic and putrefactive organisms which might produce gastric post-operative complications, if not intestinal sepsis and infection of an adjacent and recent wound. He had described a typical class of case in which from the start there was foetor and a foul tongue, and in which gastric disturbance was present. The teeth might or might not be affected. As to parotitis, he quite agreed with Mr. Stephen Paget that its origin might be found in the nerve communications with the trigeminus, and in the sympathetic supply. The large branch from the auriculo-temporal, and those from the cervical ganglion of the sympathetic, sufficiently explained such reflex disturbance. On the other hand, its septic origin was more easily understood from direct invasion through the lymphatics of the mouth than from those of the pelvic organs. His whole object in the communication he had made was to draw attention to the mouth and teeth as possible sources of unexplained sepsis in certain cases, or as aggravating those gastric complications which occur occasionally, and which interfere with a normal convalescence.

PROLAPSUS UTERI.

The PRESIDENT read Mr. Stanmore Bishop's syllabus of his paper, and asked Dr. Macnaughton-Jones to re-open the discussion standing adjourned from the December meeting. As Mr. Bishop unfortunately was not present, the notes of the remarks now made would be sent him, and his reply could be heard at the next meeting of the Society.

Dr. MACNAUGHTON-JONES traced the gradual evolution of the operation on the utero-sacral ligaments from Amussat's first efforts by caustic potash and cautery in the posterior fornix in 1850, to the last operations of Bovée in 1897 and 1900. There was absolutely nothing new either in regard to our knowledge of the part played by the utero-sacral ligaments or the idea of shortening them through the vagina or abdomen. Herrick, Byford, Freund, Frommell, Sanger, Wertheim, and Mandl successively and successfully operated in both ways, and by different technique. In a recent paper in the *Annals of Gynæcology and Pediatrics*, Bovée reviewed the whole history of the different methods, and gave the statistics of ninety-one operations, by various operators, most of which were performed for retroversion. So far as could be ascertained the great majority were successful. The operation for retroversion as performed by Bovée was not a serious or a complicated one, and unless the round ligaments were at the same time shortened the abdomen was not opened. The operation of Mr. Stanmore Bishop, he assumed, was only to be thought of for prolapse, and, moreover, only for prolapse of a severe nature. The round ligaments had in some instances also to be shortened, and a subsequent perineorrhaphy to be done. Mr. Bishop spoke of the risk of wounding the ureters and rectum. In his (Dr. Macnaughton-Jones') experience, the ureters were not always so easily recognised as Mr. Stanmore Bishop appeared to think. Save by seeing the peristalsis of the tube we could not often be certain if it were the ureter or not. At any rate, taking the severity of the procedure into considera-

tion, and the risk attending it, it was only in very severe cases that it could be thought of, and he (Dr. Macnaughton-Jones) doubted if in some such a hysterectomy with colporrhaphy might not be as little risky and more satisfactory. In all other cases he should prefer the older methods of treating prolapse, such as closure of the vaginal outlet by Howard Kelly's method, by free colporrhaphy and perineorrhaphy, with amputation of the cervix when required, or in other cases shortening of the round ligaments with ventral suspension or fixation. Also in regard to these operations on the utero-sacral ligaments, the result as influencing parturition was not known, and it was a question whether, even in cases of retroflexion, they compared favourably with shortening of the round ligaments or ventro-suspension. Mr. Stanmore Bishop was certainly to be congratulated on the success that had so far attended him in his results, and also on his splendid technique. But it was doubtful if this particular operation would take the place of those others that he had mentioned.

Dr. J. J. MACAN said that in claiming that he had devised his method of dealing with the utero-sacral ligaments independently, Bovée had very frankly acknowledged his indiscretion in not having made himself acquainted with the literature of the subject before claiming priority in that method. The whole question of operating for prolapse had been very fully discussed at the last meeting of the British Medical Association, and the conclusions drawn by Berry Hart, who opened the discussion, were practically those come to by Howard Kelly in his "*Operative Gynæcology*," and by Kuestner in Veit's "*Handbook*." Resection of the vulval orifice with colporrhaphy, anterior or posterior, or bilateral as advocated by Edebohls during the discussion, or with the formation of a septum uniting the anterior and posterior vaginal walls, combined with amputation of part of the cervix when necessary—and that was but seldom—would prove quite sufficient for ordinary cases of prolapse. Extreme cases of procidentia, which

might perhaps justify abdominal section, usually occurred in women approaching, if not past, the menopause, and in such hysterectomy combined with resection of the vulvo-vaginal orifice, extending, perhaps, as recommended by Dr. Edge, into the broad ligaments, or as Mr. Christopher Martin had performed it, with extirpation of the vagina, would be a more efficient operation than any method of dealing with the ligaments. The operation proposed by Mr. Bishop, though so successful in his hands, did not seem likely to be adopted widely in cases in which the abdomen had not to be opened for other reasons than the displacement.

Dr. WILLIAM DUNCAN regretted that he had not had the advantage of hearing Mr. Bishop's paper. He (the speaker) thought most cases of prolapse could be efficiently treated without abdominal section. He had tried years ago the Alexander-Adams operation of shortening the round ligaments, but was dissatisfied with it. When an abdominal section was necessary he preferred ventro-suspension or ventro-fixation to any other method.

Mr. STEPHEN PAGET said that the injection of paraffin which he had lately been utilising for deformed noses, had also been used for prolapsus uteri, and many cases had been treated by that method on the continent. In conjunction with Dr. Robinson, of the West London Hospital, he had injected an ounce and three-quarters of paraffin into the anterior and posterior vaginal walls and beneath the mucosa on the posterior part of the cervix of an old lady, whose uterus had been prolapsed for twenty-eight years, and had lately been down all day, and, if returned into the vagina, a cough or sneeze was sufficient to cause it to protrude again. The result had been to narrow the vaginal orifice to such an extent that it would now admit two fingers only instead of the closed fist as previously, and the prolapse no longer returned even under the most severe tests.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, APRIL 23, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

SPECIMEN.

NOTE ON A PEDUNCULATED FIBROMYOMA OF THE UTERUS.

Exhibited by J. INGLIS PARSONS, M.D., M.R.C.P., &c.

THE patient, a single woman, sent to me by Dr. Keightley, was 23 years of age. She complained of severe pain in the pelvis, especially on taking much exercise. Her menstruation was regular and normal in amount, with some, but not excessive, pain. She had a slight white discharge, no constipation.

Examination under an anæsthetic revealed a tumour the size of an orange somewhat to the right of the fundus, which was diagnosed as a fibroma, and on January 21 I opened the abdomen and found a pedunculated fibromyoma attached to the posterior wall of the uterus. The lower segment was shelled out of the capsule and the tumour removed; the remainder of the capsule, which made a good pedicle, was tied with silk in the ordinary way. The ovaries and tubes were normal. To avoid leaving a large scar, the incision, which was not more than two and a half inches long, was made so low down that only an inch of it projected above the pubic hair. The wound was closed in three layers, and the patient made a rapid recovery with a normal temperature. It is unusual to find fibromyoma so early in life, and still more so to find the tumour pedunculated.

The PRESIDENT said that to him the chief interest of

the case seemed to be the cause for which the operation was performed, namely, the pain. Pedunculated fibroids of small size were, when free from the fundus, generally able to move about, and it seemed that when they gave rise to pain it was from their becoming incarcerated and pressing upon the pelvic nerves. It was an interesting point as to what amount of pain and suffering would justify operation in a young patient with so small a tumour.

Dr. MANSELL MOULLIN had met with two or three instances of fibroids at the age of 23, pedunculated tumours like the one shown. One of the largest growths of the kind he had ever removed was from a patient of 24, and it was rather remarkable that she had been, in spite of the tumour, a skirt dancer. The differential diagnosis of such a tumour as the specimen from an ovarian dermoid was sometimes difficult.

Dr. HERBERT SNOW asked what had been the length of the pedicle? A long pedicle generally implied that the tumour had been some time in existence. The age of the patient was a point of great interest. Fibromyomata appeared as a rule during menstrual life and were comparatively seldom seen in women under 30. The age of a woman, like the existence of pregnancy, was a matter which was not to be accepted merely upon her own statement: the physician must rely upon his own observation and corroborative evidence, and he wished to know whether in this case Dr. Parsons had had any corroboration of the patient's statement as to her age.

Dr. C. H. F. ROUTH said that though the idea that these tumours were more prevalent among civilised people was generally accepted, there was no material for forming a conclusion on the point. When a tumour of the kind was found in a young woman of 23, as in the present case, if it was not removed it would increase; and the fact that Dr. Inglis Parsons' patient did not have a bad symptom after the operation was encouraging. He had himself once removed a tumour weighing 22 lbs. from a young lady aged

25. It had been growing for five years, and could not be left to get still larger. But if a tumour was small when discovered he thought it should be treated by the prudent use of biniodide of mercury, which would in many cases cause a small growth to disappear. When a woman was pregnant he did not think she should be operated upon for a fibroid tumour.

Dr. MACNAUGHTON-JONES believed that it had been laid down that 20 per cent. of all women suffered from myomata before they were 30—that is to say, seven years only older than the patient under discussion. At least one instance of congenital myoma had been recorded, and in a girl aged 9, a myoma of considerable size had been found associated with a number of smaller tumours. Myomata are certainly rare under the age of 20, but Roger Williams has recorded several cases of such, at 14, 19, and 20 years, and the present case was very interesting as the patient's age was but little more.

Dr. HODGSON pointed out that there was more likelihood of pain arising from a tumour of the intermediate size of the specimen than from a pediculated growth of a larger size, which might rise above the brim of the pelvis and not press upon the sacral nerves.

Dr. G. O. HUGHES asked at what stage tumours such as the present one were detected? Was it when menstruation was established or not until they reached the size now seen?

Dr. INGLIS PARSONS, in reply, agreed with Dr. Mansell Moullin as to the difficulty of differential diagnosis; though sure that the growth was a fibroid, he had thought it might possibly be ovarian. The tumour had been almost sessile, so that he had to cut round the thick pedicle and enucleate part of the tumour before he could tie the remainder. The patient was a private one, and her age had been confirmed by her father. As regarded his reasons for operating, the patient had been under the care of four other medical men before being under Dr. Keightley for four or five months; she had suffered much and was unable to take

exercise without acute pains. Moreover, there was the danger of the uterus being retroflected by the tumour becoming impacted in the pelvis, and causing acute symptoms demanding immediate operation. He had, in recommending operation, been influenced also by the recent reports of pedunculated tumours, which when the pedicle extended had become attached to the intestine or omentum, and had even caused strangulation of the bowel. The size at which a fibroid could be diagnosed depended upon the thickness of the abdominal walls and upon whether an anæsthetic was given, as well as upon other conditions ; but he had several times detected growths not larger than a walnut.

DISCUSSION ON PROLAPSUS UTERI.

The PRESIDENT said that Mr. Bishop had asked him to allow Dr. Edge, who had come up from Wolverhampton for the purpose, to be heard. Any other Fellow present who had not had an opportunity of joining in the discussion of Mr. Bishop's paper might speak after Dr. Edge, before Mr. Bishop replied.

Dr. FREDERICK EDGE expressed his regret that he had not been able to be present when Mr. Bishop read his paper, or at the adjourned discussion upon it. He had, however, based the remarks he was about to read, by permission of the President and Mr. Bishop, upon the report in the *Medical Press and Circular*. He then read the following notes :—

“There are certain anatomical conditions that it is indispensable to consider as a preliminary to what I have to say upon prolapse. In the first place, the pelvic fascia, from which all the pelvic viscera depend, is attached, above, to the promontory of the sacrum, the ileo-pectineal line, and the back of the symphysis pubis ; and below, to the coccyx, the great sacro-sciatic ligaments, the tubers of the ischia and the base of the triangular ligament. The

visceral pelvic fascia and its divisions are the immediate suspenders of the pelvic organs. The anterior true ligaments of the bladder, the bases of the broad ligaments and the utero-sacral ligaments are specially strong and dense portions of this fascia, and in the utero-sacral and broad ligaments there is muscular as well as fibrous tissue.

“ In prolapsus uteri the visceral pelvic fascia is stretched, thinned and wasted, as Mr. Berry Hart pointed out very distinctly at the last meeting of the British Medical Association. Some of Mr. Bishop's ideas seem to invite criticism. (1) He says: ‘ A return to the normal is practicable in the majority of instances, and that, the parts are affected by injury or traumatism and not by disease,’ ‘ their relations are changed, but in most cases they are intrinsically but little altered.’ If we allow the second statement to pass, the first cannot be objected to, but it is usually granted that the fascia and muscles *are* very much altered intrinsically; as a rule, the supporting tissues are attenuated, atrophied and degenerated; a return to the normal can only take place by these tissues regaining their normal condition, which they are hardly more likely to do than a worn out piece of rubber or steel is to recover its characters. Possibly, being living tissue, if put under favourable conditions they may *grow* normal, but this means long rest and increased nutrition, and would not be an immediate return to the normal. (2) The idea that the round and the utero-sacral ligaments are the only true ligaments of the uterus does not express the whole truth. The uterus is supported mainly by the visceral layer of the pelvic fascia and the round and utero-sacral ligaments containing muscular tissue, rather adjust the position than support the weight of the womb. The horizontal direction of the utero-sacral ligaments found on examination by the rectum or vagina shows that they support no great weight. (3) The vesico-cervical ligaments are strong portions of the fascia; the reason they yield at an early stage is because they are carrying great weight at a time before any strain is put

upon the utero-sacral ligaments. (4) The bases of the broad ligaments with the thick cellular tissue about the vessels form very strong supports to the uterus, and the perfect suspension of the organ, even by one side only, is practically seen in cases of pelvic cellulitis. I have at present under my care a charwoman, a multipara, with extreme cystocele, rectocele and vaginal descent, whose uterus, nevertheless, is prevented from prolapsing by cellulitis on the right side. Dr. Inglis Parsons utilises this effect in his treatment by injection of quinine. (5) The case of Mrs. M., given by Mr. Bishop, shows the effect of complete laceration of the perineum, first pointed out by Professor Taylor; owing to the bowel evacuating itself without difficulty there is no straining as in ordinary rectocele, straining which, by causing retroflexion, would further obstruct the bowel and call for increased expulsive effort. Complete laceration is seldom followed by prolapse. (6) As regards the action of Hodge's pessary, I do not agree with Mr. Bishop: the best effects of this pessary are seen in retroflexion, in which, though the utero-sacral ligaments may be relaxed, the main *fascial* support keeps the uterus about its normal level. (7) As regards technique, Mr. Bishop draws the uterus forward with sutures. I do not see any real objection to the use of volsella.

"I cannot think that Mr. Bishop's operation will effect permanent cure in ordinary cases of prolapse; it may cure retroflexion, and perhaps be as efficient as ventrofixation in acute primary prolapse, such as is met with in virgins and multiparæ. But when the whole visceral layer of the pelvic fascia is elongated and thinned out, a condition exists which cannot be remedied by merely suturing the portion of it which forms the sacro-uterine ligaments.

"What then ought to be done in cases of prolapse? Theoretically, we may say (1) ventrofixation, or shortening of the (2) round, (3) sacro-uterine, (4) pubocervical, or (5) broad ligaments; but practically, a supravaginal amputation with removal of the appendages and careful suture of

the parts will give complete relief when we have to operate by the abdomen, and in cases that can be dealt with by the vaginal way, amputation of the cervix with vaginal fixation and double lateral colporrhaphy, will prove quite satisfactory.

“In the very worst cases, as in cases of separation of the recti and thinning of the abdominal walls, the patient is perhaps better off with complete rest and a carefully applied support; but where it is necessary or allowable to remove the uterus and appendages, the ideal procedure is to suture the visceral pelvic fascia so as to form a complete floor. In order to expose the fascia for such complete suture, it is necessary to remove the upper portion of the vaginal mucous membrane.”

Dr. INGLIS PARSONS said that as Mr. Bishop's first case was done in February, 1902, and his eleventh and last in March, 1903, the time and material were not sufficient for them to form a judgment on the efficacy of this method of treatment. It was no doubt based on sound principles, for Savage had found by experiment that when the uterus in the cadaver was forcibly depressed the utero-sacral ligaments were the first to give way, then the broad, and last of all the round ligaments. The treatment of prolapse must be considered quite apart from that of retroflexion. It would be ridiculous to depend upon hysteropexy for the relief of procidentia in an old woman with flabby abdominal walls, nor was it of much use to repair the pelvic floor and do nothing else; even if the patient were kept at rest for a considerable time the uterus would come down again, though the repair of the pelvic floor was a great help in the treatment of these cases.

In the last six years he had treated seventy cases of prolapse by injecting a solution of quinine into both sides of the broad ligament. The operation was a perfectly simple one, taking only about a few minutes, could be done under gas, and in the great majority of cases was absolutely effective. The injection was followed by an

effusion of lymph, which might be attributed to a plastic cellulitis; but there was no rise in temperature, at all events not oftener than once in thirty cases, and then save in one woman of 70 years of age the rise had been very slight. There were naturally a few failures, more especially in debilitated and anæmic women who had borne very many children; but even in such, after feeding them up with port wine and iron, a repetition of the injection was often successful. In one instance a procidentia of fifteen years' duration was perfectly remedied by a third injection, which caused a good effusion of lymph on each side without any rise of temperature. The solution he used contained 12 grains to a drachm of equal parts of distilled water and dilute sulphuric acid; he made one puncture on each side and injected 1 drachm at each sitting. With the patient in the lithotomy position, and the position of the bladder ascertained by the passage of a sound, by entering the needle from half an inch to an inch from the uterus below a horizontal line through the os, and directed a little outwards, both the uterine artery and the ureter would be avoided. He thought Mr. Bishop's operation a perfectly scientific one, but believed that his own method would be most used on account of its simplicity and safety.

Dr. G. O. HUGHES said that he had noticed, when assistant to Dr. Emmett, of New York, that as long as the pelvic floor was intact the uterus remained in position, unless there was some tumour present. Retroflexion, the first stage of complete prolapse, was brought about by overweight or by deficient support; if any tumour were present it should be removed, but if the pelvic floor were injured it had to be repaired. Suspension of the uterus did not remove the primary cause of the displacement.

Mr. STANMORE BISHOP, in reply, said: I feel that I must assure the Society that it was entirely owing to unforeseen circumstances that I was prevented from attending the meeting on March 12, at which my paper was discussed. My enforced absence on that occasion I have the less reason

to regret as, by the considerate ruling of the President that I should be furnished with a report, I have been enabled to give that careful consideration to the criticisms expressed which was due alike to the objections therein put forward and to the professional reputation of my critics; I could appeal to no court better fitted to pronounce judgment upon any operative procedure in gynæcology, and I could ask for no more sympathetic audience. It is, however, possible that even those who consider the operation dangerous or unnecessary, may come to a different conclusion after a personal experience of it; so far as I gather none of the speakers had up to the date of that meeting actually tried it.

The discussion this evening has turned less on my operation than on Dr. Inglis Parsons' ingenious method of injecting the broad ligaments with quinine, of which, as I have had no personal experience, I will not venture to say more than that after what I have heard of its success in his hands, I shall certainly try it myself.

Dr. Macnaughton-Jones and Dr. J. J. Macan both very properly lay stress upon the previous literature of the subject, and the former declares that there is absolutely nothing new either in regard to our knowledge of the part played by the utero-sacral ligaments or the idea of shortening them through the vagina or abdomen. Dr. Macnaughton-Jones refers to Amussat, Herrick, Byford, Freund, Frommell, Saenger, Wertheim and Mandl as having successfully operated for this purpose. It is rather surprising to find on verifying these quotations that Amussat, Nicoletis, mentioned by De Bayle and Herrick, simply denude the posterior fornix, and close it by uniting the cervix to the posterior vaginal wall. As in all these cases of prolapse both cervix and vaginal wall descend, it would seem to be immaterial whether they come down separately, or united the one to the other. If a man is on a ladder and the ladder falls, it makes but little difference to the ultimate position of the man whether he is tied to the ladder or not.

Before referring to the other authors cited, permit me to repeat once more that the operation I recommend is intended for cases in which these utero-sacral ligaments are *torn through*, or so attenuated as to be incapable of being felt, and have therefore practically ceased to exist : not for merely weakened ligaments. In the latter cases I believe that no such operation is required at all, the support of a properly fitting pessary for a sufficient length of time, assisted in some cases by perineorrhaphy, being all that is necessary in order to obtain a return to the normal, by permitting these ligaments to regain their temporarily lost tone. Now, Byford, Saenger, Gottschalk, Godinho, and Frommel expressly state that they define the *existing* utero-sacral ligaments before commencing their operation, whilst Bovée actually dissects them out before proceeding to shorten them. Byford, for instance ("Medical and Surgical Diseases of Women," Philadelphia, 1888, Fourth Edition) begins thus : "With a pair of tenacula forceps I drew the cervix forward until I could feel the somewhat tense sacro-uterine ligaments with a finger of the other hand. . . . I introduced a stitch by the aid of touch along the sacro-uterine ligament, so as to grasp an inch or more of it," &c. I submit therefore that all such operations do not affect the point in question at all. If they did I should point out further that they are most of them far more risky than my own, since the point of the needle being out of sight may easily wound some other structure, a coil of intestine, for instance, which may lie above and immediately in its line of passage in Douglas' pouch, and undiscoverable until later fatal results revealed the mischief done.

Surgical procedures are governed by evolution, and it cannot be an argument against any fresh step that previous ones have been made already.

Dr. Macnaughton-Jones considers the procedure itself unduly severe, and the risk attending it greater than that of a hysterectomy, whilst Dr. Macan speaks of hysterectomy

combined with resection of the vulvo-vaginal orifice extending into the broad ligaments as recommended by Dr. Edge, or Mr. Christopher Martin's extirpation of the vagina, or even Dr. Edebohl's complete extirpation, as though these were all less dangerous to life than my own method. I confess that I cannot agree with them, nor do I think that, when they have done me the honour of carrying out this operation, that they will continue to hold the same opinion. But especially I would urge upon them the consideration of the difference in result. An extirpation, or a total closure or obliteration of the general tract may be easy or not, may be safe or not, one thing is certain, that sexual life for that patient is over; and there can be no return to the normal in her case. After the operation I have brought before you, the woman is as fit to exercise her sexual functions as ever she was.

Two other points seem to deserve attention. Dr. Macnaughton-Jones refers to the possibility of not recognising the ureter. But it is not a question of distinguishing the ureter from any other structure behind the parietal peritoneum. All such should be avoided, whether ureter, vessel or nerve trunk. All such structures elevate the peritoneal layer, which elsewhere lies flat and closely applied to the sacral periosteum, and there is ample room between them. With the patient in the Trendelenburg position, opposite to a good light, these projections can easily be seen and as easily felt, and there is practically no danger of wounding any of them, so that it is not necessary to spend time over identification. The position of the ureters, however, thanks to the work and plates of Kelly and Deaver, is perfectly well known, and personally I have never had any difficulty in tracing their course.

Mr. Stephen Paget's suggestion as to the infiltration of the parts with paraffin might possibly in some otherwise hopeless case be useful as a *dernier ressort*, but I do not see that otherwise it affects the question at issue.

Dr. Edge objects to my using the phrase "return to

the normal," admitting that the tissues might grow normal, but denying that they could be made so by operation; but the objection is not of much force, for if the patient's condition were so improved by the operation that it would return to the normal, that such return was not immediate did not annul the advantages of the operation. Dr. Edge thinks the sacro-uterine ligaments are horizontal, and speaks of the yielding of the vesico-cervical attachment; but as Professors Birmingham and Dixon have shown, the direction of the utero-sacral ligaments in the erect posture is not horizontal but midway between that and the perpendicular, they are therefore of much greater importance in the support of the uterus than Dr. Edge supposed, and in my experience the pubo-cervical attachment is the last to give way.

In conclusion, I feel sure that the general tendency of operations for the relief of intractable prolapse will be towards those which attempt to restore the normal condition, and less and less towards those which substitute merely one deformity for another, even if the last state is an improvement upon the earlier.

The PRESIDENT, after thanking Mr. Bishop for coming up to London to complete the discussion, said that as Mr. Bowreman Jessett had sent a paper "On Intestinal Obstruction, an uncommon Complication of a Ruptured Ectopic Gestation," and to their great regret was accidentally prevented from being present, he would ask the Secretary, Dr. Swanton, to read the paper, which could be discussed on a future occasion.

INTESTINAL OBSTRUCTION: AN UNCOMMON COMPLICATION OF A RUPTURED ECTOPIC GESTATION. By FREDERICK BOWREMAN JESSETT, F.R.C.S., Surgeon to the Cancer Hospital, Brompton.

On January 8 I was asked by my friend Dr. Webster, to whom I am indebted for notes of the case, to see a patient with him at St. George's Infirmary. She was a

married woman, aged 37, who had been admitted on January 5, 1903, complaining of severe pain above the umbilicus and inability to "pass anything." Her bowels, indeed, had not been relieved for three days. The day before her admission she had been seized with violent and acute pain in the region of the umbilicus. Her only labour, about nine years ago, had been difficult, and the child had been delivered stillborn, under chloroform. Since then her periods had been quite regular, lasting two or three days; but the last, a month ago, came on after an interval of nine weeks, continuing as usual, without clots or pieces of membrane. She had enjoyed her usual health until two or three days before her present illness began, and until then her bowels had been regular. She suffered from occasional attacks of indigestion and flatulence. She was always anæmic and of pale complexion, so much so that she went by the name of the "pale-faced" girl. On January 4, whilst sitting reading a newspaper, she was suddenly seized with a severe pain in the abdomen around the umbilicus, followed by vomiting, and she felt faint and ill, and became rapidly worse. A medical man who was called in to see her diagnosed diaphragmatic pleurisy and pleuritis, and had her removed to the Union Infirmary on the following day. On January 5 the following note was made:—

Present Condition.—Lying on her back with her legs drawn up; an anxious expression of face; temperature 97° F.; pulse very feeble. She complains of severe pain across the abdomen. Nothing abnormal to be detected about the chest; incessant retching, and after drinking anything, immediate vomiting. No stercoraceous matter. Abdomen much distended and tympanitic, especially over the region of the colon; no marked tenderness or rigidity; below the umbilicus on the left side a sense of greater resistance, but nothing definite to be made out. *Per vaginam*: the os somewhat patulous, admitting the tip of the finger, its margins fissured. Tilting the cervix caused

no increase of pain; fornices apparently clear; a very slight yellowish-white discharge. *Per rectum*: Bowel empty. No motion or flatus had passed.

Small doses of opium were administered and hot fomentations applied over the abdomen. Castor oil and turpentine enemata brought away some small pieces of fæculent matter, but no flatus passed and no improvement followed. Nutritive enemata were given, but not retained. When I saw her on January 8, in consultation with Dr. Webster and Dr. Coulson, she was in a very collapsed condition, the abdomen was distended and tympanitic, but without any marked tenderness, the chief pain being referred to the umbilical region and cæcum. There was nothing to guide one either by the vagina or rectum. A rectal tube was passed, but coiled up in the rectum. There was no fulness or bulging of either fornix. No motion or flatus had passed for four days, while the retching had been incessant.

I came to the conclusion that she was suffering from intestinal obstruction, probably situated in the colon, and recommended immediate operation. On the afternoon of the same day, with the assistance of Dr. Coulson, I operated, with the intention of doing a preliminary iliac colotomy to relieve the bowels and give the patient time to pick up a little strength, before a more radical operation, if thought necessary and desirable, should be attempted.

As soon as the patient was under the anæsthetic I had her transfused by means of two long needles, passed one under each mammary gland. These were attached to an ordinary douche apparatus. By this means about two quarts of saline fluid was introduced during the operation.

On making my incision through the abdominal walls, about two inches above and internal to the left superior spinous process of the ilium, and getting down to the peritoneum, I was at once struck by the dark colour appearing beneath it, and on opening this membrane a large quantity of dark blood and blood clot at once escaped. Passing my hand into the cavity I evacuated a huge quantity of blood

clots, I should think fully two quarts. I then passed my hand rapidly into the pelvis and drew up the uterus and a mass adherent to it in the left side. On getting this up and wiping away the blood clot, it at once became evident that I had to deal with a ruptured tubal gestation.

The intestines, which were enormously distended and protruding from the wound, much impeded my view, so I asked Dr. Webster to pass a long O'Beirne's tube into the rectum as high as he could, and by this means the colon was rapidly emptied of a quantity of stinking liquid fæces and a large amount of flatus, so that I was enabled to return the emptied colon into the abdominal cavity. I then ligatured the tube and removed it, with the foetal gestation and ovary. A difficulty then arose with the small intestines, especially the jejunum, which was distended and protruding; in fact, large coils of intestine were lying on the abdominal parietes wrapped in warm moist towels. I found it impossible to reduce these without using considerable force, so I made an incision about one inch long, parallel to the axis of the intestine on the side opposite to its mesenteric attachment, and emptied the bowel after having protected the peritoneum as well as possible. I then stitched up the opening, first the mucous membrane, then by means of a continuous suture through the peritoneal and muscular coats, and finally with five silk blanket sutures, washed the parts and returned the intestine into the abdomen.

A quantity of blood clot had become located in the different pockets of peritoneum; this I carefully removed, washed out the whole cavity with saline fluid and closed the abdominal wound. The patient was returned to bed in a very collapsed condition; nutritive enemata with brandy were administered and subcutaneous injections of strychnine given, but with no good result, and she gradually sank and died during the night.

Remarks.

This case is, I think, of considerable interest from several points of view—in regard to the diagnosis, the cause of intestinal obstruction, and the treatment of the distended intestine. The diagnosis was obscure from the outset. The patient had no suspicion of being pregnant, as she had her periods naturally only four weeks before admission. It is true there had been a lapse of nine weeks before this, but as she had not been pregnant for nine years previous to that time, she did not take any particular notice of the interruption. Then while in her usual health, sitting quite still reading a paper, the first symptom she experienced was acute pain in the *region* of, and *above*, the umbilicus, followed immediately by violent vomiting and a feeling of faintness. The pain being referred to a point above the umbilicus, instead of being, as is most usually the case, more in the pelvis and lower abdomen, suggested some mischief in the upper part of the abdominal cavity, and the doctor on seeing her diagnosed diaphragmatic pleuritis. But the faintness and vomiting would equally point to some intestinal trouble, an opinion which would be strengthened by the fact that from the initial symptoms of pain, faintness and vomiting there was complete cessation of any action of the bowels, or indeed any passage of flatus. As the abdomen became distended and the vomiting and inability to retain anything on her stomach increased, I had no doubt whatever that she was suffering from intestinal obstruction, and the symptoms all pointed to the obstruction being situated in the colon. What the cause of the obstruction was it was impossible to say. Immediate operation was the only possible means of saving her life. She was, however, in such a collapsed condition that it was evident that it would be only possible at the best to perform a colotomy with a view of relieving the bowels, and afterwards, if the patient rallied from this operation, to deal with the case according to future exigencies.

When on opening the peritoneum I was met by a gush

of dark black blood and blood clot, I was at a loss for a minute to account for it; the idea of perforating ulcer presented itself, and then that of ruptured tubal pregnancy. Having cleared the clot away as quickly as possible, I brought the seat of the hæmorrhage quickly into view and controlled it, but in order to do this I had of course to enlarge the incision I had made for the inguinal colotomy considerably, with the result that the enormously distended intestines escaped from the abdomen and had to be wrapped in towels wrung out of hot water, while the O'Beirne's tube, by means of which the flatus escaped and the colon was at once reduced, was passed into the rectum. This enabled me to get a good view of the tube and the bleeding point. A ligature was quickly applied and the tube and ovary excised. The intestines were then found to be coated in many places with blood clot, which it was very difficult to remove. I then had to deal with the distended jejunum, which, without using such force as to risk injuring the intestine, it was quite impossible to return into the abdominal cavity. I therefore decided to make a clean incision into the bowel on the side opposite the mesenteric attachment. This was quite effectual, and the flatus and contents were evacuated, the opening closed as described and the bowel returned.

The questions naturally arise: First, what was the cause of the obstruction? and secondly, was the correct operative treatment adopted?

Was the inability to pass anything by the bowel due to the pressure of the blood clot on the colon and sigmoid flexure, or was it due to a paresis of the bowel? It is difficult to understand how a soft blood clot could so compress the bowel as to prevent the passage of its contents, or even the escape of flatus. No. I think we must look for some other cause. There appear to be two solutions. The contractile power of the circular fibres of the bowel was lost, either from the sudden shock and loss of blood in a woman already somewhat bloodless, or the pressure

upon the splanchnic and sympathetic nerves was such as to cause paresis of the bowel. In any case the possibility of hæmorrhage must be remembered and taken into account when one is called to a case in which intestinal obstruction appears to be the predominant symptom in women. That such a condition in ruptured tubal gestation is very rare is certain, and I can find only two or three instances recorded. One is reported by Dr. J. Rutherford Morison. A woman, aged 35, sitting quietly at tea, suddenly jumped up and called out, "Good God! What a pain!" and fell on the floor unconscious. She recovered consciousness the next day, and her pulse could be felt. Three days later, when Dr. Rutherford Morison saw her, the abdomen was much distended and tense, and her general condition, although still bad, had improved. Operation showed an enormous quantity of blood in the peritoneal cavity and a ruptured pregnant Fallopian tube. The small intestines were extremely distended, all efforts to get the bowels to act by medicine and enemata failed, and the patient died three days after the operation. *Post-mortem* examination showed only enormously distended and anæmic intestine.

Every one who has much experience in abdominal surgery must not infrequently meet with cases in which the intestines are so distended that they are with difficulty returned into the cavity. In ordinary cases no doubt the passage of O'Beirne's tube is of great service in emptying the colon, but if there has been complete obstruction and the small intestines are much distended, it is often impossible to reduce them. It is desirable in such cases to have some definite rule to guide one as to the best method to adopt. That the contents of the distended bowel must be evacuated there can be no doubt, and various methods for doing this have been recommended. Some surgeons advise the introduction in different spots of a fine aspirating needle, others use a large-sized cannula, while the majority of those practising intestinal surgery adopt the method I employed of

making an incision parallel to the axis of the intestine on the side opposite to its mesenteric attachment.

After a somewhat extensive experience of intestinal surgery I am convinced that puncturing the intestine by a fine aspirating needle or a larger cannula is bad practice. At the most you can only allow a certain quantity of flatus to escape, and the danger of sepsis is considerably greater than if a free clean incision is made. Moreover, it is necessary to puncture the intestine in a number of different places. With the knife one incision is usually sufficient, though occasionally, in very severe cases, it may be necessary to make openings in two, or possibly three, different places; it is, however, astonishing how long a tract of bowel can be emptied through one opening, by careful manipulation and gravitation.

In opening a bowel in this way great care has to be exercised in drawing the loop to be incised well away from the rest, and packing thoroughly all around it with gauze and towels soaked in some weak antiseptic fluid. When the bowel has been emptied sufficiently, the parts around the opening should be carefully washed and cleansed; then in closing the wound, the mucous coat should be carefully stitched first, with a continuous catgut suture; a second row of catgut sutures should then be introduced, catching up the peritoneal and muscular coats of the intestine; and finally, a row of fine silk or linen sutures should be passed by Halsted's method or blanket stitch, so as to bury the two first rows. By this means the opening into the intestine is made quite secure and all fear of leakage avoided.

NEW FELLOWS.

THE following gentlemen have been elected Fellows of the British Gynæcological Society :—

William Wilberforce Baldwin, M.D., New York, U.S.A.

Daniel Birtwell, L.R.C.P., L.R.C.S.Edin., Durban, Natal, South Africa.

George Henry Brandt, M.D., Paris, Nice, France.

Ralph Anthony Bull, L.R.C.P., L.R.C.S.Edin, L.F.P.S. Glasg., Ashton House, George Street, Leamington Spa.

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ORIGINAL COMMUNICATIONS.

THE EARLY TREATMENT OF ACUTE PUERPERAL
INFECTION.

BY JOHN W. BYERS, M.A., M.D., M.A.O. (Hon. Causâ).

Professor of Midwifery, Queen's College, Belfast; Physician to the Belfast Maternity Hospital; Physician for Diseases of Women to the Royal Victoria Hospital, Belfast; and Examiner in Obstetric Medicine and Gynæcology to the Royal University of Ireland.

THAT the treatment of puerperal infection (that is, the various fevers of the puerperium due to infection by micro-organisms) is its prevention has been amply proven by the brilliant results obtained in properly conducted maternities; but, unfortunately, this is not true of general practice, where, as shown by Dr. Boxall¹ and myself,² the mortality from puerperal infection still remains very high. Further, there can be no question that many cases met with in gynæcological practice have their origin in milder forms of infection occurring at the time of delivery. Seeing, then, that cases of puerperal infection are still common, it is our duty to inquire whether the great advances in medicine of recent years have helped us in their treatment. In order to make the matter as practical as possible, suppose we are called to a patient who, on the third or fourth day after her confinement, has (with or without the history of a rigor) a temperature of 103° F., and a pulse of 120 to 130, what are we to do?

I think, under these circumstances, the scientific accoucheur should try, if possible, to solve the following problems :—

(1) May the pulse be quickened and the temperature be raised by causes (intercurrent maladies) other than puerperal infection ?

(2) If, however (and this, unfortunately, is true of nearly all the cases of fever in the first five or six days after delivery), the patient is suffering from the results of puerperal infection, what form of micro-organism is causing the symptoms, or is the patient's condition due to poisoning by more than one type of microbe ?

(3) Through what portion of the genital tract has the patient been infected ?

(4) What are the indications for treatment—local and systemic ?

(1) Although the vast proportion of cases of fever following confinement are due to wound infection of some portion of the genital tract by micro-organisms, still all obstetricians of experience meet at times with cases where intercurrent maladies simulate for a time, especially at their onset, the more serious forms of puerperal infection. In a paper³ read in the Section of Obstetric Medicine at the Carlisle meeting of the British Medical Association, July, 1896, I drew attention to such cases with examples, and pointed out that, broadly speaking, we are kept right in our diagnosis by the following points: (*a*) There are usually no special pelvic or abdominal symptoms; (*b*) the lochia are normal; (*c*) the secretion of milk continues; (*d*) careful examination enables us to discover some complicating disease present at an early period, which in itself is sufficient to account for the patient's state; and (*e*) the history of the case and the patient's previous medical condition help in diagnosis.

(2) Suppose (as is usually the case) the patient is suffering from the results of puerperal infection, what form of micro-organism is causing the symptoms; or is the patient's condition due to poisoning by more than one type of micro-organism? In former years, largely owing to the teaching of the late Dr. Mathews Duncan, it was thought there were

two kinds of infective disease met with in the early stage of the lying-in period : one, sapræmia, where the system is attacked by a chemical poison—a toxin—elaborated by the action of non-pathogenic microbes on dead decomposing matter (lochial discharge, pieces of placenta, membrane, &c.); and it was thought if the dead decomposing matter on which the microbes were acting was removed, the chances were the patient would recover.

The second kind of infective disease, septicæmia, is due to the entrance into the blood and multiplication there of virulent micro-organisms. Recent investigation, however, indicates that the distinction thus drawn between septicæmia and sapræmia cannot be maintained (Krönig¹ and Jearmin⁵); for it has been shown that saprophytic microbes, which it was supposed would only give rise to sapræmia, may actually, in the absence of any true septic organisms, enter the circulation and give rise to fatal blood-poisoning. Further, we now know that the organisms which may give rise to puerperal infection are far more numerous and varied than was formerly believed. Not merely the streptococcus, staphylococcus, gonococcus, bacillus coli communis, the Klebs-Loeffler bacillus of diphtheria, but the pneumococcus, the so-called gas bacillus, and various forms of anaërobic bacilli, as well as others not yet thoroughly identified, may give rise to puerperal infection. Considering, therefore, the great variety of micro-organisms met with in cases of infection after delivery, it is the duty of the scientific obstetrician, when he is confronted with a case of wound infection in the puerperal period, to examine carefully not only the vagina but the uterus for the presence of microbes. This is best done as follows : The vulva being carefully sterilised, a piece of cotton wool is inserted into the vagina to absorb some of the discharge there and is then placed in a test tube corked with cotton wool, and sent to the laboratory ; but, as it is the endometrium of the uterus which is the place most usually infected, cultures should also be taken from it by

means of Doederlein's tube.⁶ Following the suggestion of Whitridge Williams, I have had a hollow glass tube prepared about the diameter of a small Bozeman's catheter, which is attached by some rubber tubing to a glass syringe. To use it, a Sims' speculum is passed into the vagina to retract the posterior wall, the uterus with a tenaculum forceps is drawn down to the vulva, the glass tube (previously sterilised) is introduced into the uterine cavity, and the syringe sucks any fluid into the tube, which is, after removal, sealed at both ends and placed in a large glass test tube (a Barker's tube for sterilising silk ligature is the one I use) with a piece of cotton-wool at each end. It can then be sent to the laboratory for examination. In a short time we can have a report, giving us really scientific data as to the form or forms of micro-organisms infecting the patient. If this is done, our treatment and our prognosis are placed on a scientific basis.

(3) Through what portion of the genital tract has the patient been infected? As in puerperal infection any portion of the generative canal may be the seat of lesion, our duty should be carefully to examine the external parts of the vulva for any tears, the perineum, the vagina, and the uterus, the living membrane of which is the part most usually affected. The condition of its interior, as we shall see, gives us hints as to treatment.

(4) What are the indications for treatment—(a) local, and (b) systemic?

(a) *Local treatment*.—While there is considerable difference of opinion as to the best kind of local treatment, all obstetricians are agreed that it should not be employed if the disease has extended beyond the uterus. I think the best method of dealing with sloughy torn edges and vaginal ulcers (the result of traumatism) is to powder them well with a mixture of equal parts of iodoform and boracic acid, or one part of euphen to six of boracic acid. If the lochia are foul a simple vaginal douche should be used, and then the uterus carefully washed out. This is

to be done at the very onset of the fever. Formerly I employed strong antiseptic douches, but as I am convinced the douche acts simply mechanically, and as I met with cases which were the worse for a mercurial douche, I now use a simple solution made of one teaspoonful of salt in a pint of boiled water, or half a teaspoonful of creolin in the same proportion of water. The greatest aseptic care should be taken in the use of this douche, the external parts being first carefully sterilised, and then the uterus is drawn down to the vulva (a Sims' vaginal speculum having first been introduced) so that the Bozeman's tube, through which the douche passes, is introduced directly, without any vaginal contamination, into the cavity of the uterus. Plenty of fluid is used. Suppose the temperature falls and does not again rise, no further local treatment is employed; but if, on the next day, it rises, then the interior of the uterus should be explored by the finger, and if the cervix is markedly patulous, and if one feels any foreign mass (often putrid and foul-smelling) in the uterine cavity, or if the finger gets the sensation of a soft tissue, which on pressure seems to break down, then I am an advocate of using the blunt flushing curette, the indications for this operation being fœtor persisting after douching the vagina, a patulous cervix, and the detection of some decomposing or soft, breaking-down material in the cavity of the uterus. On the other hand, if the endometrium is smooth, and if the laboratory report is that it is a streptococcic infection, no curetting should be done. When the uterus is curetted it should be packed with iodoform gauze. At the present time (as anyone can see by reading Dr. Arnold Lea's recent article⁷) the propriety of curetting the uterus in acute puerperal infection is a very debatable one. I can only give my own experience and the indications in which, in my opinion, it is a sound procedure. I have employed it sometimes twice and three times successfully in the same patient.

(b) *Systemic treatment*.—Every effort should be made

to keep up the patient's strength by frequent feeding with easily assimilated nourishment (beef-tea, milk, soups, eggs, &c.), by alcohol in its various forms, and the hypodermic injection of large doses of strychnine to maintain the action of the heart, and by cold sponging to bring down the fever. When the bacteriological examination or the clinical symptoms show we have to deal with the true streptococcus infection (septicæmia), the above systemic treatment must be continued; but my experience of the antistreptococcic serum has not been favourable, and it is absurd to argue that in any given case when it has been employed that the patient's recovery is owing to its use, unless a previous laboratory examination has shown that the infection is due to the streptococcus alone. In a case which I attended, a lady, three days after her first confinement, developed a fever, and on careful culture of the lochial discharge in the laboratory of Queen's College, Belfast, no micro-organisms except the pneumococcus were discovered. Curiously, the baby developed a patchy pneumonia. The patient subsequently recovered without the use of any serum. Had, however, the antistreptococcic serum been employed, as is so often the practice in cases reported in the medical journals, without any bacteriological examination of the lochia, the recovery would have been attributed to its use. The indications for the use of the antistreptococcic serum are the fact that the infection (as proved by bacteriological examination) is due to the streptococcus alone. As to the employment of nuclein,⁸ saline transfusion, intravenous injections of Credé's collargolum,⁹ intravenous injection of sublimate¹⁰ and hysterectomy in the treatment of puerperal infection, I have no personal experience.

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ON THE PROBLEM OF THE DETERMINATION OF SEX.

By Professor B. S. SCHULTZE (Jena).

Honorary Fellow of the British Gynæcological Society, &c., &c.

THE Vienna embryologist, Schenk, started an idea that the sex of the children to be borne by a woman might be determined by modifying her metabolism, but, so far as I am aware, his views have not been accepted in any quarter. The considerations underlying them had no sufficient scientific foundation, nor have they been confirmed by the results of experiment.

Schenk, however, raised again the old, old question, why the development of an ovum should lead in one case to a male, and in another to a female offspring, and I have now before me two recent works upon it which lead to contradictory conclusions, and which, in my opinion, are inaccurate in the way the inferences made have been drawn. Doederlein¹ holds that the theory that the sex of the human ovum is determined before fertilisation cannot be upheld in face of the fact, demonstrated by statistics, that men who are old in comparison with their wives beget a larger proportion of boys than agrees with the average number of males among all children born. Lenhosték² maintains that even in the ovary the ovum already has the character of sex, and denies that the husband has any influence upon the sex of the child.

In 1855 I expressed my opinion that all the conditions necessary for the development of either one sex or the other from an ovum were decided in the ovary, and wrote :³

“All twins with a common chorion, like all double monsters, are of one and the same sex; reported cases of the contrary always prove, when accurately investigated, incorrect, the apparent difference in sex turning out to be no more than an arrested development of the genital organs. When in connection with this we also consider the fact that actual hermaphroditism, the co-existence in one individual of testes and ovaries, of masculine and feminine germ-furnishing organs, has never been observed in the human being, nor, save perhaps in the most exceptional cases, in the other mammalia, it is evident that from a mammalian ovum only one sex, either masculine or feminine, can develop. Moreover, it is certain that, by the simultaneous fertilisation of more than one ovum, embryos of different sex may develop, and it is therefore probable not only that the cause of sex does not lie in the seed of the male, but rather that the conditions for the development of the one or other sex are present in the ovum even in the ovary.”

No one now maintains the old ideas that one ovary furnishes male, the other female ova; one testicle male and the other female seed; the evidence against them is too strong. Both boys and girls often enough have developed from the ova of one ovary after the extirpation of the other, and have been begotten by seed from one testicle after the removal of the other. Nor does anyone still believe that from an embryo, as long as it does not exhibit characters of its sex, that is to say, in the human being for about six or seven weeks, an infant of either sex may possibly develop.

Doederlein very justly says that it is not consistent with the view that an embryo already developing in the womb can be of undetermined sex to suppose that the father exerts any influence upon the sexual character of the offspring. Yet certain ascertained statistics offer very strong evidence of the action of such an influence. In the first place, the older the father is, in comparison with the

mother, the more does the excess of male infants exceed the average proportion of male births (Hofacker, Sadler and others); and secondly, to breeders of horses and cattle it is a well-known fact that the stallion or bull upon whom more demands are made, which is allowed to cover sixty or even more females in the year, will beget a larger proportion of male offspring than one which has to fertilise only twenty or thirty females.

From the first of these facts Doederlein concludes that it is not right to suppose that the ovum is primitively endowed with a definite sex, "otherwise it is self-evident that the age of the begetter could not be a factor in the determination of the sex of the offspring." Of course it could not in that of the embryo from any particular ovum, but very well might be in determining the proportion of sexes born. It is quite possible that the seed of the older man is more adapted to fertilise male than female ova, and though we do not yet absolutely know that this is the case, I think it important to point out that the facts ascertained by Hofacker and Sadler are not conclusive proof that the ovum in the ovary is not of a definite sex.

Lenhossék argues in favour of the definite sex of the ovum in the ovary on the ground especially of thoroughly discussed biological analogies, as well as on that of the identical sex of uniovular twins. At the conclusion of his treatise he says: "Scientific research has, as we have explained . . . led us to accept as a fundamental fact almost indubitable, that in the animal kingdom the determination of sex is a prerogative of the maternal organism, and precedes the fertilisation of the ovum." And on an earlier page: "Men must therefore resign themselves to the idea that to them no direct influence in the determination of the sex of their children is accorded, and that this determination is entirely left to the organism of the female individual." The possibility of even an indirect influence he only admits so far as, for example, the peculiarity of having more male children may be transmitted

through the son to the granddaughter. The ascertained statistics of Hofacker and Sadler, which he terms suppositions and hypotheses, he treats as controverted, though to me they seem to be facts as well ascertained as the above-mentioned results in horse and cattle breeding.

The apparent contradiction between these facts and the theory that the ovum in the ovary has a definite sex disappears if we suppose that the seed of the older man is better adapted to fertilise the male than the female ova of the younger woman; that spermatozoa fresh from the testicle of an actively-employed stud male is more effective in impregnating the male than the female ova of the dam.

Or the hypothesis may be put in this way. The male ova derived from the ovary of a young woman offer more attractions to the spermatozoa of an older man than the female. The male ova of the dam are more accessible to spermatozoa coming fresh from the testicle of the covering male than the female, and the latter are, on the whole, more accessible to spermatozoa which have for some time been ready awaiting their discharge from the male organs.

It is, at all events, certain that even the prerogative of the male to influence the comparative number of his male and female offspring is not inconsistent with the theory that even in the ovary the sex of every ovum is already decided.

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REVIEWS.

DIE CHLOROFORM- UND AETHER-NARKOSE IN DER PRAXIS.
VON Dr. KOBLANCK, Privatdocent an der Universität,
Oberartz der Königlichen Universitäts Frauenklinik
zu Berlin. Wiesbaden : J. F. Bergmann, 1902.

This book is of no slight interest and value. It presents a purely continental view of a subject which has received more thorough study—at all events in its practical aspects—among English speaking nations than elsewhere, and this statement is emphasised by a glance at the bibliography prefixed to the volume. In it we find only one British name mentioned and that in connection with a wholly unimportant communication. It is true that in the text one or two other names appear, but these again, if we except a passing reference to Simpson, are not of those whose work has added to the large stock of knowledge which we now possess concerning the physiological action of anæsthetics, and the practice of anæsthesia.

In the first section of the book we are given the chemistry and the physiological action of chloroform and ether, but the chemistry, although accurate, is meagre in extreme, and the physiology is that of Claude Bernard and Paul Bert, neither of whom carried the subject to any degree of precision. Dr. Koblanck has, however, made some amends for this incomplete review of the foundation work of his subject in the sections dealing with the indications and contra-indications for the use of ether and chloroform, the preparations for giving an anæsthetic and the actual management of its administration.

Those who are not familiar with the methods pursued in Germany will be struck by the fact that in reading this

book they find chloroform and ether placed side by side, their uses and modes of administration regarded as differing in degree rather than in kind, if indeed difference in substance is admitted to exist.

Superficially one might gather that the dangers of chloroform were those causing failure of crippled hearts and inducing asphyxia; those of ether mainly such as follow the aspiration of mucus, vomitus and so on, into the air passages, and so causing pneumonia. To form such a judgment, however, would do injustice to the author. While from an English standpoint the practical side of the subject is too lightly touched upon, yet the book contains a surprisingly large amount of information upon the general aspect of anæsthesia.

In practice we are left to use Julliard's mask for ether, a *quasi*-open method, seldom used and but little known in England, and for chloroform, Schimmelbusch's mask, which is similar to Skinner's, and a drop bottle. Even in skilled hands Julliard's mask necessitates the use of excessive doses of ether, while that of Schimmelbusch leaves everything to the care and judgment of the person who commands the drop bottle. Dr. Koblanck's directions concerning the preparation and examination of the patient before giving the anæsthetic and commencing the operation are extremely good. Whether diabetes, leukæmia, and marked anæmia are absolute bars to the use of a general anæsthetic may be questioned. Undoubtedly, as the researches of Fiske and others have shown, extreme leucocytosis may contraindicate operation, but it is doubtful whether, if the operation is justifiable the anæsthetic need be dreaded.

All practical surgeons will agree with Dr. Koblanck when he urges the importance of a large airy room for operations under a general anæsthetic, and the absolute necessity for committing the charge of the anæsthetic to one expert man, whose attention must in no wise be drawn from his task. So the avoidance of noise—the "clashing of instru-

ments" during the induction of narcosis—is advice worthy of heedful recognition.

The symptoms of danger are well put, and Dr. Koblanck's interesting work upon the curious condition of the fingers and wrists resembling athetosis, which shows itself in chloroform toxæmia, should receive close study. Such after-effects as peripheral paralyses, lung complications and hæmatic degenerations, receive careful consideration in the pages before us. It is impossible within the prescribed compass of this notice to examine more of Dr. Koblanck's conclusions; we trust, however, we have made it plain that the volume is one well worth perusal, as well on account of its originality as of the large amount of valuable and suggestive information which is compressed into its forty-two pages.

THE PRINCIPLES AND PRACTICE OF GYNÆCOLOGY FOR STUDENTS AND PRACTITIONERS. By E. C. DUDLEY, A.M., M.D., Professor of Gynæcology, North-western University Medical School; Gynæcologist to St. Luke's and Wesley Hospitals, Chicago, &c. Third Edition, revised and enlarged; with 474 illustrations, of which 60 are in colours and 22 full page plates in colours and monochrome. London: Henry Kimpton, 1903.

The first edition of Professor Dudley's book on the diseases of women appeared in 1898, the second in 1900, and the one before us is, except for the title page, presumably, identical with the third edition published in Philadelphia last year by Messrs. Lea Brothers.

It is difficult for one busy in active professional life and teaching to find time to re-write and re-arrange a work of this size; there are signs that the revision has been incomplete and gaps remain. Many errata should have been avoided by more carefulness on the part of the publisher's reader, but there are others. On the whole, the illustrations are good and some singularly beautiful. The series

showing the consecutive steps in hysteromyomectomy, salpingotomy, vaginal hysterectomy, ovariectomy, and curettage are particularly instructive. But many others are disappointing; a considerable number appear quite unnecessarily twice, there is no list of the illustrations, the references to them in the text are repeatedly incorrect, the descriptions, at all events as regards those on pages 436-7, are inaccurate or transposed, and we miss Ziegenspeck's explanation why the position of the examiner in figure 16 is intentionally misrepresented.

There is an excellent chapter on the inflammations of the urinary passages, especially as regards cystitis, which, formerly considered as almost a distinct disease, is now, owing to improved methods of investigation, come to be recognised as a symptom only. Cystoscopy is adequately described in the chapter on diagnosis.

For hand disinfection Professor Dudley employs permanganate of potash, and afterwards corrosive sublimate and alcohol, and he recommends rubber gloves for all persons whose hands are directly or indirectly brought into relation with the field of operation. He uses catgut sterilised by dry heat or formaldehyde, and prefers gauze sponges; if drainage cannot be avoided he thinks the vaginal way the better, and gauze better than tubes, but after a clean operation does not drain. If pus escape into the peritoneal cavity, he flushes it out with 0.6 per cent. salt solution, of which he leaves a considerable amount in the abdomen. He is inclined to reverse the classical dictum and say, "When in doubt, don't drain."

On the whole, the book is one to be heartily recommended, especially as an exposition of surgical technique. No one but an expert and fearless operator such as Professor Dudley is known to be could have written it, and we are struck by the tone of judicious conservatism which pervades it throughout, and feel that the author has shown himself to be what, in his dedication, he says he has aimed at, a worthy pupil of Thomas Addis Emmet.

PUBLICATIONS RECEIVED.

GEH. MEDIZINALRAT PROFESSOR DR. B. S. SCHULTZE, on receiving his Diploma as an Honorary Fellow, has presented to the British Gynæcological Society copies of the following works of which he is the author :—

Das Nabelblaschen ein constantes Gebilde in der Nachgeburt des ausgetragenen Kindes. Leipzig, 1861.

Untersuchungen ueber den Wechsel der Lage und Stellung des Kindes in den letzten Wochen der Schwangerschaft. Leipzig, 1868.

Der Scheintod Neugeborener. Jena, 1871.

Quatre tableaux graphique pour le diagnostic bimanuel et pour la reduction de l'uterus en retroflexion. Leipzig, 1897.

Lehrbuch der Hebammenkunst. Leipzig, 1899.

Experimentelle Prufung verschiedener Methoden kunstlicher Atmung Neugeborener (from the *Beitraege z. Geb. u. Gyn.*, 1900).

Zum Problem der Schlechtbestimmenden Ursachen.

A translation of the last will be found at page 80.

FROM JOHN BALE, SONS, AND DANIELSSON, LTD., 83-89, GREAT TITCHFIELD STREET, LONDON, W. :

Contributions to British Gynæcological Society, Session 1902-03, by J. HALLIDAY CROOM.

FROM F. BAUERMEISTER, 49, GORDON STREET, GLASGOW :

Atmokaussis und Zestokaussis in der Gynaekologie, von Dr. L. Pinkus in Dantzig. Wiesbaden, J. F. Bergmann, 1902. Price m. 10.60.

FROM E. MERCK, DARMSADT, AND 10, JEWRY STREET, LONDON, E.C. :

Recent Observations on New Preparations, and Digest.

FROM E. STECHERT, STAR YARD, LONDON, W.C., AND NEW YORK.

Chronic Headache and its Treatment by Massage. By GUSTAF NORSTROEM, M.D., of Stockholm, 1903. Price 4s. 6d.

FROM THE LIBRARIAN, TORONTO UNIVERSITY :

On the Identification of Meckelian and Mylohyoid Grooves in the Jaws of Mesozoic and Recent Mammalia. By B. ARTHUR BENSLEY, B.A.

Transactions of the North of England Obstetrical and Gynæcological Society. 1903. Fasciculi I. and II.

FROM N. T. BREWIS, F.R.C.S. Edin., Assistant Gynæcologist Edinburgh Royal Infirmary : Notes on Two Cases of Cancer of the Cervix at the Fifth Month of Pregnancy treated by Panhysterectomy.

FROM GEORGE M. EDEBOHLS, A.M., M.D., NEW YORK.

Renal Decapsulation for Chronic Bright's Disease.

FROM DR. KURT KAMANN, Assistant to Professor A. Martin, Greifswald.

Zwei Faelle von Thoracopagus tetrabrachius.

FROM T. N. KELNYACK, M.D., M.R.C.P., Assistant Physician to the Mount Vernon Hospital for Consumption and Diseases of the Chest : The Selection of Consumptive Cases for Sanatorium Treatment.

FROM J. M. MUNRO KERR, M.B., C.M., F.F.P.S.G., Assistant to the Professor of Midwifery, Glasgow University, &c., &c. : Cæsarean Section, with Notes of a Series of Nine Successful Cases (*Glas. Med. Journ.*, June, 1902).

FROM HENRY J. KREUTZMANN, M.D., SAN FRANCISCO.

Are Ventrofixation and Ventrosuspension of the Uterus justifiable Operations ?

FROM FRANZ NEUGEBAUER, M.D., in Warschau : Ein interessanter Fall von zweifelhaftem Geschlecht.

FROM J. S. STONE, M.D., Washington, D.C. : The Mortality Resulting from Abdominal Section for Pus in the Pelvis ; Some Recent Operative Work for the Relief of Prolapse of the Uterus and Bladder.

THE BRITISH GYNÆCOLOGICAL JOURNAL.

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BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MAY 14, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

SPECIMENS.

CIRRHOTIC AND CYSTIC OVARIES.

DR. MACNAUGHTON-JONES showed with the epidiascope complete sections of cirrhotic and cystic ovaries. In both cases the adnexa had been removed for prolonged and incurable dysmenorrhœa. In one case the patient was a single woman, and Dudley's operation had been previously performed without any result, and lately her mental state had been causing apprehension. The other was a married woman who also suffered from retroversion. Ventrofixation was performed in the latter case. Having remarked that the severity of the pain was occasionally altogether out of proportion to the pathological changes found in an ovary, and that the mere macroscopical inspection of an ovary was of little value when the entire structure—as in the cases he was exhibiting—was altered, he discussed the question of resection of the ovaries. There was no doubt that conservative operations, whenever feasible,

were to be preferred to removal. Still it was often extremely difficult to pronounce by a superficial examination of the ovary during operation whether there were not present such gross changes throughout the ovary as to render any partial operation useless. He had done a number of conservative operations, and in the majority of cases with successful results, both as regards relief of pain and conception. The difficulty in deciding, in the case of ovaries such as those shown, when there were present all through their substance cortical, interstitial, and parenchymatous changes, together with alterations in the follicles and cystic degeneration, was great. There were also the cases in which there were secondary degenerations of small cysts found throughout the ovary, sanguineous and other. The four sections exhibited on the screen prepared by Mr. Eastes, the pathological changes in which were described in Mr. Lockwood's reports (which he, Dr. Macnaughton-Jones, also read), showed such degenerative changes throughout the entire ovary. In both of the cases he had brought forward, complete relief and restoration to health had followed operation.

Dr. Macnaughton-Jones also showed an ovary and pedunculated myoma. The latter, resting on the fornix of the vagina, it was impossible to differentiate it from the diseased ovary, which was pushed upwards and backwards by the tumour. It exemplified the difficulty of diagnosis in such cases.

The PRESIDENT observed that, had he been aware of the subject Dr. Macnaughton-Jones was to bring before them, he would have himself brought a series of cirrhused ovaries which showed the same characteristic alteration of the stroma that was to be seen in the specimens before them. The small ovary associated with the fibroma was typical of a condition met with not infrequently, a shrinking of the organ that by its tenseness gave rise, as in this instance, to intense pain. Cirrhosis of the ovary was, he thought, a subject that merited more attention; it

was hardly sufficiently recognised that that distinct disease was as good a reason for the removal of an ovary as a large ovarian cyst.

Dr. HERBERT SNOW thought that the severe pain in cirrhused ovaries depended more on tension than upon anything else. Even in rapidly growing cell growths in acute malignant disease in young persons, when these growths were not surrounded by rigid fibrous tissue, there was scarcely any pain until ulceration set in, a fact in striking contrast to conditions of the ovary without obvious enlargement, and yet giving rise to great pain. Pain might, however, be due not only to tension of the capsule but to local peritonitis and adhesions, or to pressure due to the position of the ovary, or to the distension of neighbouring viscera, too commonly a loaded rectum.

Mr. BOWREMAN JESSETT said that all gynæcologists must have met with cases similar to those described by Dr. Macnaughton-Jones. Only last week he had operated for a retroversion with enlargement of one ovary and some disease of the other, which after four years' fruitless treatment had left the patient a confirmed invalid. But he was convinced that it was wise, if possible, always to leave some ovarian tissue behind in order to avoid the melancholia that too often supervened on complete oöphorectomy; and in cystic disease one should endeavour by resection to leave at all events a portion of healthy ovarian tissue behind, and if this could be done, even on one side, it would be a great advantage to the patient. No doubt the chief cause of the pain was the tension of the capsule, but by dividing the capsule and removing the cysts the tension and pain were often relieved, while menstruation was not interfered with.

Dr. C. H. F. ROUTH had understood Dr. Macnaughton-Jones to say that ovaries which on inspection seemed to be healthy were in reality very often diseased, as in the sections shown upon the screen by the epidiascope. At one time women were deprived of their ovaries in a wholesale fashion,

and in a paper on Castration he had read to the Society he had given statistics of the number so removed and had pointed out that when examined by a well known and experienced pathologist, in a series of 300 cases 5 per cent. only were found to be diseased. French writers had confirmed this. He could not accept the doctrine that oöphorectomy should be performed more frequently than at present.

DR. BEDFORD FENWICK showed two ovaries which in a very striking manner corroborated the important point established by Dr. Macnaughton-Jones. These ovaries were much enlarged, studded with cysts, and as they were adherent to a fibromatous uterus reaching nearly up to the ensiform cartilage, had been removed with it. Upon the question whether, in hysterectomy, the ovaries should, as a matter of principle, be removed or left behind, there were two opinions, but of late the idea seemed to have prevailed that the ovaries or part of them, or one of them, should be left. In a paper he had read to the Society a few months ago he had mentioned that in a large number of hysterectomies nearly every ovary and tube, like the ones before them, had presented more or less gross disease; and in nearly every one there was great hypertrophy of the muscular coat of the ovarian artery and an obvious reason for congestion of the ovarian tissue. If that were the case generally, as he had found it to be in his own experience, it would seem that gynæcologists were making a grave error in leaving diseased ovaries behind when removing a diseased uterus. He believed that the ovaries were diseased in all or nearly all cases of uterine fibroids of any size, and that in such cases disease was set up by the hypertrophy of the muscular tissue of the ovarian arteries due to the impeded circulation through the fibroid tissue of the uterus.

DR. WILLIAM DUNCAN said that as far as one could judge from the sections projected upon the screen there could be no question as to Dr. Macnaughton-Jones having

adopted the proper treatment in the interesting cases he had brought before them that evening. He did not himself think that mere enlargement and superficial cysts justified the removal of the ovaries. It was his custom to excise all the cystic portions he could detect, and to leave some part of the ovary behind, and this practice had given him very good results. Unfortunately one could not tell beforehand whether ovaries were completely cirrhotic like those exhibited by Dr. Macnaughton-Jones. He could not approve of the complete removal of ovaries simply because they appeared large and cystic from dilated Graafian follicles on their surface. With regard to the removal of the organs in hysterectomy: it was not his experience that in cases of fibroid tumours the ovaries were diseased in most instances, or even in the majority, though they were so in a certain percentage. The general consensus of opinion nowadays was that in hysterectomy one or both ovaries, or at least a portion of one ovary, should be left; certainly when that was done the patient made a quicker and more comfortable convalescence than when the organs were entirely removed, and she altogether escaped the painful symptoms met with after the artificial menopause. He would not therefore agree to the complete removal of the ovaries in hysterectomy, unless they were very adherent to the uterus and the operation would be rendered much more difficult and critical by trying to separate them.

Dr. F. A. PURCELL said that without any special reference to the idea now prevalent of the value of the ovary to the female or of the after results of its removal, in publishing a series of vaginal hysterectomies some years ago he had enunciated the principle that the ovaries should be left behind to aid in preventing the descent of the intestines into the vagina. As far as possible this principle had been carried out in his operations, but when the organs were enlarged and cystic they were removed. In women

who had passed the menopause he did not see any advantage in leaving a hard cirrhotic ovary behind.

Dr. DUNCAN explained that he was referring only to cases in which the removal of the ovaries was proposed during menstrual activity.

The PRESIDENT pointed out that Dr. Bedford Fenwick's specimen also presented the density of the envelope, to which he proposed to direct their attention when he brought his own specimens before them. In connection with conservative operations on the ovary, and with the pain that was apt to supervene in the stump after removal, it seemed possible that if the ligature was passed over the lower part of the ovary, leaving a portion of the organ behind, there would not be so much pain.

Dr. MACNAUGHTON-JONES, in reply, said the ovaries which he exhibited had been shown to be diseased all through, and he came to the conclusion in both of the cases that the only hope for the woman would be to remove those ovaries. Certainly the sections exhibited proved that he was right, and he had recently brought forward a case in which the patient had twins after the removal of one ovary and resection of the other. He was not in favour of removal of ovaries unless conditions such as he alluded to that evening were present. When a woman was approaching the portals of a lunatic asylum or becoming a morpho-maniac, doing a partial resection of the ovary was a thing to which he would not subscribe. Where there was true cirrhosis of the ovary, complete alteration of connective tissue into fibrous tissue, where the follicles were altogether altered and unhealthy, and the whole ovary converted into a sclerosed condition, resection was useless. He had no idea until he received the sections which had been so admirably cut by Mr. Eastes, what the nature of the changes was. It was a great help to have the use of the epidiascope for projecting the pictures so beautifully on the screen so that Fellows could judge for themselves of the pathological conditions. He agreed with what Dr. William Duncan had

said. He thought it was a decided advantage in hysterectomy to leave an ovary if it were not pathologically involved ; he would be slow in an ordinary case of fibroma to remove both ovaries, but that was a matter which required to be considered by the operator, and which he alone could decide, whilst he was carrying out the procedure.

Dr. Macnaughton-Jones likewise showed a uterus with a carcinomatous mass occupying the summit of the fundal cavity. The cervix was absolutely free from disease. There was no extension into the adnexa, nor any glandular involvement. He considered the case, which was one of a woman advanced in life, as exactly suitable for Bumm's operation. The patient was very anæmic, and exhausted by severe hæmorrhages, so that it was important to do an operation as rapidly as possible, and with as little loss of blood. He described the operation which he had seen Professor Bumm perform at Hallé (v. *ante*, vol. xvii., p. 351). It was rapid, practically bloodless, and there was no risk to the ureter. The carcinoma in this case was diagnosed by previous curettage.

Mr. CHARLES RYALL said from the first incision into the abdomen to the removal of the uterus did not take so much as twenty minutes in this case, the rest of the time was taken up in the ligaturing and subsequent steps in the operation. Much difficulty was sometimes met with in entering the vagina from the abdomen, and this was not to be wondered at, as the vaginal vault was of considerable thickness. Dr. Macnaughton-Jones had employed percussion, and, obtaining a resonant note at the lower end of the cervix, had no hesitation in making a rapid and accurate incision.

Mr. BOWREMAN JESSETT thought that as the case was diagnosed as one of malignant disease, vaginal hysterectomy would have been preferable for a uterus of the size of the specimen, but if it had to be removed by the abdomen he thought most surgeons would rather ligature the broad ligaments from above downwards as they went, a method

that practically prevented the loss of blood even in the removal of good sized fibroids.

Mr. MANSELL MOULLIN failed to see the novelty in the method, which seemed to be simply a panhysterectomy in which the use of such a large number of forceps was rather a complication than an advantage. He preferred to ligature as he went along. In securing the ovarian vessels he put forceps over the ligature to prevent it slipping during the handling of the parts in the remainder of the operation; but in the case of a small uterus of the size of the specimen there was no fear of hemorrhage—the whole matter could be controlled by the hand without either forceps or preliminary ligatures. He differed entirely from Mr. Jessett as to vaginal operations. The abdominal method had distinct advantages; there was no fear of the descent of the intestines mentioned by Dr. Purcell, nor of their adhesion to the cut surfaces of the vagina, nor any hæmorrhage to be dreaded; the operator could see what he was doing, and secure the vessels as they bled. When the uterus came down easily into an open vulva it could of course be removed from below without difficulty.

Dr. BEDFORD FENWICK said that he had found that any difficulty in locating and entering the vagina could be entirely obviated by the introduction of a Ferguson's speculum and thus defining the vaginal edge.

Dr. WILLIAM DUNCAN said that no doubt Dr. Macnaughton-Jones had very good reasons for adopting the abdominal route in this case. If the patient was an elderly woman with a small vagina, they all knew the difficulty of removing a uterus by that passage. He had himself been obliged to lay open the perineum as far as the anus, and even then found it far from an easy matter. Though he preferred to do an abdominal hysterectomy rather than a vaginal one, he could not agree that it was as safe for the patient, and in her interests, when removing a uterus for cancer, would, if possible, do so by the vaginal route. With regard to fibroids the matter was different, as he did not believe in panhysterectomy, and always left a portion

of the cervix, and did not enter the vagina at all. He failed to see the advantage of Professor Bumm's method, and agreed with Dr. Mansell Moullin that the operation could be performed as quickly and with as little loss of blood, ligaturing as one went along. It must be remembered that the ligatures had to be applied in any case. Last week he had removed a uterus extending above the umbilicus in twenty-five minutes, and he was certain the patient did not lose two teaspoonfuls of blood.

The PRESIDENT said that the discussion had wandered from the question, which was as to the advantages of Professor Bumm's method of panhysterectomy. With previous speakers he agreed that the number of forceps was a disadvantage; they certainly took up a great deal of room, and there was some danger of injuring the ureter with the lower ones.

Dr. MACNAUGHTON-JONES, in reply, said that both Mr. Jessett and Dr. Duncan knew very well that numbers of cases of cancer were quite outside the sphere of the vaginal operation—cases in which it was necessary to examine the broad ligaments and the pelvic glands. In fact, in such cases the only satisfactory method of giving a woman a permanent chance of recovery was to go entirely wide of the disease; if not, it was better to regard her as an inoperable case. To talk of vaginal hysterectomy being the operation of the period for cancer was to go back ten years in surgery.

[Owing to the protraction of the discussion it was decided to have Dr. Routh's paper on "Cancer and Its Prevention" printed and circulated, and that it should be discussed at the next meeting.]

DISCUSSION ON INTESTINAL OBSTRUCTION: AN UNCOMMON COMPLICATION OF ECTOPIC GESTATION.

Mr. BOWREMAN JESSETT having given a short *résumé* of his communication read at the last meeting (*ante*, p. 64):

Mr. MANSELL MOULLIN asked how long a period elapsed before the operation was performed, and suggested that

sepsis might account for the distension of the intestines. He had met with two similar cases in which there was great distension, though the bowels had not given such trouble as in this case. When the clot was septic, as he thought it must have been in the present case, the operation was fatal. If the sepsis was recognised and if the clot presented in the vagina, he thought the best course was to make an opening in the posterior cul-de-sac, break down the clot, and flush it out, a course that would give the patient a better chance than opening the abdomen.

The PRESIDENT said the chief points in the case were the question of diagnosis, and, secondly, what had led to the obstruction of the bowel and the distension. The ectopic gestation had not been suspected before the operation, but had it, by leading to a great effusion of blood, either directly, or by altering the relations of the bowel to itself, caused the complete arrest of its contents? He thought they might ask Mr. Jessett what theory he had formed himself.

Mr. JESSETT, in reply, said that the first symptoms, acute pain and collapse, had occurred five days before the operation; but owing to the very unusual seat of the pain, entirely above the umbilicus, the case had been at first diagnosed as one of diaphragmatic pleuritis. He did not see her till all the prominent symptoms were those of intestinal obstruction, and as there had been no history of pain below the navel, no suspicions of ectopic gestation were aroused; moreover, the patient had not been pregnant for nine years, and had been regular up to four weeks before her seizure. The probable explanation was, in his opinion, that the distension of the bowel and the inability to pass either fæces or flatus was due to a general paresis of the bowel from loss of blood; the contractile power of the rectum was completely lost, but whether that was due to pressure on the gut, or on the splanchnic area or sympathetic, he did not know. There was no *post mortem*; the clot was not offensive, but the contents of the bowel were very much so.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JUNE 11, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

ON SOME DIRECTIONS AND AVENUES THROUGH WHICH CANCER MAY POSSIBLY BE MORE SUCCESSFULLY TREATED, AND PERHAPS CURED. By C. H. F. ROUTH, M.D., Consulting Physician to the Samaritan Hospital for Women, W.

I do not presume to be a cancer curer, nor one who can indicate in all cases the cause and procedure of this terrible disease. I would even go further, and say that in very many cases even the most skilful fail to say what is and what is not cancer: all I pretend to do is to point out what appears to me to be the direction to which we should turn towards a cure, in seeking an antidote and a preventive to the extension of the disease.

There are some points about cancer which are clearly made out.

(1) It is an *hereditary* disease; it exists down several generations. I myself knew a family in which three aunts and a niece had it. Sir J. Paget also quotes (*Lancet*, December 6, 1902) a case in which cancer affected three generations. Erichsen spoke of it as an admitted fact.

(2) There is no doubt that it is *contagious* to the *patients* themselves. Recurrences after operation, both in the affected part and parts at a distance, admit of no doubt: they are of daily occurrence.

(3) It is also communicable by *inoculation*. Hanan, of Zurich, inoculated one rat from another, and this other died

from cancer. Moran performed the same experiment on two mice with a similar result. Whitehead records the case of a father and son, both having cancer of the lip; but then, both drank out of the same glass. He also relates a case of a gentleman with carcinoma of the lip, who gave it to a favourite little terrier who was in the habit of licking his master's lips. Cases are also recorded where the glans penis of a man, whose wife was suffering from uterine cancer became affected with cancer. Many analogous cases I could quote from the *Lancet*, leading article of December 6, 1902. Very often, however, in exactly similar cases all these phenomena do not occur, and the disease is not apparently contagious. For instance, it is proved that in a vast number of cases where inoculation has been practised upon healthy persons or animals from a cancerous patient, no result follows the transplantation. In the particulars given of eighteen experiments on animals—dogs or cats—no result occurred except the natural healing of the part on which the inoculation was made. Some additional influence is needed (*Medical Press*, November 1, 1893, p. 456).

(4) Certain *localities* seem to favour cancer. Take the example of a little village in Normandy, Saint Sylvestre de Corneilles, with some 400 inhabitants. Armandel shows that while in Paris the mortality from cancer is 4·16 per cent., in this village it is 14·88. The same thing was observed in the inquiry made by the British Medical Association in 1898, but it was limited to the Warwick, Stafford, Salop, and Worcester counties. In some parishes the mortality from cancer was very excessive, in other parishes it was very small. Mr. Alexander quotes a remarkable case, three men, all unrelated, succeeded one another as night watchman, each one occupying the same bedroom as his predecessor. All three died from cancer within four years. Dr. Chapman relates the fact of three successive tenants of a house, all died from malignant disease of the rectum. Mr. T. Law Webb and Mr. Haviland speak of two houses under one roof with a common water supply and

a common drainage system. In one of these thirty years previously a man died of cancer of the rectum. The house was next occupied by a man and his wife. The man died two years after from carcinoma of the stomach, and the widow ten years later from cancer of the rectum. Before the last death, a woman living in the adjoining house had cancer of the breast. At her death the house was occupied by three maiden ladies; one of these died of cancer of the uterus, and another with all the signs of carcinoma of the stomach. Mr. D'Arcy Power and Dr. Fane relate similar cases, and this in similar houses, but at intervals of thirteen and twenty years. Further particulars on this kind of contagion will be found in the able article before quoted, and will well repay perusal. But I must pass on to other points for inquiry.

A series of articles on the subject of cancer mortality was published in the *British Medical Journal*, and on May 16, 1903, a general summary was given (pp. 1154-5), in which two other causes were assigned as the results of statistics—*firstly*, forests, or a large number of trees surrounding domiciles; and *secondly*, two kinds of beverages, beer and cider. By each of these causes an impetus seems to be given to the production of cancer.

(5) *The disease is on the increase.* When account is taken of the preceding fifty years, cancer in the present day in London has more than doubled. In 1851 it was 42 per 1,000, and even in 1891 it was 78. Islington with 300 deaths, Lambeth with 300, Camberwell 352, and Wandsworth and St. Pancras with just over 200 per 1,000, suffered most severely in 1901. Comparatively few cases prove fatal before 35 years of age, and the heaviest mortality is between 55 and 65 years of age. Here also we have an indication of the variable number of cases in some parts of our great city. Dr. Harold Mason, of Leamington, states after the investigation of cancer cases, that in upwards of one-fourth of all the houses in which cancer existed complaints of bad drainage had been made. More-

over, it was not evenly distributed over the whole area; it was a "patchy" distribution. It was not common to find the cases occurring in a particular house, but in several houses in the same row, and especially in contiguous houses; while in many streets no deaths from cancer had occurred. Again, in a large proportion, 17·5 per cent., of these "cancer houses," it was the corner houses of streets, or the houses on either side of court entrances, in which the disease was found, indicating probably a malignant influence from soil. A germ would explain this fatality, especially where the food was kept in cellars, where the water would more certainly gravitate impurities. Advanced age in women of sedentary and domestic habits may safely be considered as an adjuvant to cancer propagation.

(6) Cancer may disappear spontaneously, after either partial or neighbouring operations.

Some very curious results have been noticed and published by several gynæcologists, by whom after an exploratory cœliotomy, done with a view of finding out the nature of a tumour or mass, otherwise not possible, it was found that though the tumour or growth could not be removed, it disappeared after the operation. Tait refers to several cases, one in which he removed a cystoma by abdominal section, but not a fibroid she had besides, who became pregnant and the fibroid disappeared. Also two other cases in which abdominal section was performed, and the tumours proved irremovable, and so were only exposed and handled; these also disappeared. Alban Doran has mentioned several cases in which, after abdominal section, irremovable tumours left in the abdomen disappeared. So also have I, in my paper on Castration of Females, cases in which papillomatous tumours, and others said to be tubercular, had disappeared, although only a very small portion was removed. More recently, in his oration before the Medical Society of London, Sir William H. Bennett, K.C.V.O.,

instances three cases he had been unable to remove and which disappeared ; and so skilful an operator as Dr. Greig Smith, of Bristol, having performed abdominal section in three cases of *malignant* disease, was compelled to close the abdomen without being able to remove the tumours, all of which disappeared when subsequently left to themselves. On the evidence of so reliable an operator as Greig Smith, we cannot doubt the truth of his success.

(7) But here we must refer to another important question, not, however, one of those which we can speak of as proved, viz., is cancer due to a special parasite ? What are we to learn from the etiology, or, more properly speaking, its histology ? I am afraid it is a Babel of science. Plimmer speaks as if much of it were only fit to be swept away ; nor am I even anxious to attempt to explain what language has only confounded. Bruce, with his blastema theory, to Throsch and Virchow, only made a small step towards a solution by ascribing cellular and embryonic life to bacteria, soon after named by Thoma as *nucleated bodies* in both the nucleus and *protoplasms* ; in fact, *parasitic organisms*, Metchinoff went one step further, and stated that the *nuclei* found in the cells of cancer were the real parasites. Later on, Ruffer and Walker and Plimmer stated that they were not *protozoa*, but blastomycetes, *i.e.*, a variety of saccharomycetes, or yeasts.

Plimmer gives us a full detail of some of these organisms in the stroma, and of the phagocytic reaction of the organism against cancer. Leucocytes abound and penetrate the cancer cells, which already contain so-called parasites, and so degenerate them. The parasites can, however, be coloured, and when so stained, can be better examined.

This short *résumé* will show how difficult a task it is to distinguish these so-called parasites, so that to this day it is not proved whether they really are *parasites*, and not

decay of tissue or disintegration. So I prefer calling them *living organisms* or *bacteria*.

But more than this, admit that they are parasites in cancerous blood, which in continuity flows through a body, and in every portion of it these must exist. They cannot be confined to a possible growth, but would be found in every part of the body, and in modified varieties. Is it so? I have been told that in tubercular sputa there are six or seven varieties of germs. To which one is the disease due? Again, some parasites by their very presence and under certain circumstances call to their assistance others, as in the purification by coke of impure water, and it is by their co-operation that the water is made pure. Singly they could not act. A curious fact which also bears upon this union I have detailed under my eighth heading, in reference to Stokes' researches. Also, we obtained additional confirmation on this point by information given to us by the late Sir Benjamin Richardson. On taking a drop of blood from two separate fingers of his body at the same time, and putting each drop under the microscope, and causing each drop to be *vibrated*—the one by *ordinary vibrations*, the other by *electrical vibrations*—he found that some of the usual histological products which are found in blood were formed, but they were never the same, doubtless due to the different local composition of the blood-drop in each finger, and the innate forces each contained. So, if we were examining *cancerous* blood we might expect to find *cancerous* cells, parasites, germs, &c., as well as *ordinary* cells, which would appear under the microscope, and so help diagnosis. Is it so now?

But such a result we might expect would follow a *moderate* vibration; a *violent* one might kill or destroy the histological parts of blood; and the experiment has been made.

“*Microbes Shaken to Death.*”

“It is well known that certain physical agencies exert a germicidal action, as, for example, light, electricity, and

heat, and to these," says the *Lancet*, "must be added the curious influence of mechanical shock. By submitting to violent agitation certain bacterial cultures it has been found that the number of germs diminished to less than one-tenth of that originally present.¹ Ultimately, by prolonging the treatment, the liquid was entirely freed from active germs and failed to develop further organisms, even when placed under favourable conditions. In another experiment bacterial cultures were allowed to stand in an engine-room of a large manufactory, in which an incessant vibration was produced by the strokes of the engine, with the result that after four days the vitality of the germs was completely destroyed, while in the case of samples which were left in a quiet place the germs, it was found, had retained their activity. It would appear, therefore, that minute vibrations have the power of hindering the growth of micro-organisms as well as violent shocks, while if either treatment be continued the germs at length die. Further experiments in this direction would be very interesting with the view of determining as to how far the process would be effectual in regard to the destruction of microbes in food. At the present time the oyster trade would welcome such a method, could it be shown that it effectually destroyed the bacilli of the colon series in the oyster without disturbing its structure or spoiling its flavour. In which case the guaranteed 'agitated native' would be in brisk demand. It must not, however, be inferred from our contemporary's

¹ In the *Therapist* (vol. xiii., No. 3, p. 47) we are told that by placing in a vial a quantity of the germs and shaking the bottle, as many as nine-tenths are put "*hors de combat*," and if the shaking be continued the rest of them were placed in the same condition. By way of a joke this shaking was fashioned into a dance. The motion of the dance consisted of at least 180 reverse movements per minute across a distance of 15 inches. This is just a way of agitation not unlike the movements in an engine room, before mentioned, by which the vitality of the germs is destroyed and they are reduced in power.

note that motor car or torpedo-boat trips will supersede all other treatments for typhoids, or that London's milk supply of the near future will be brought into town in springless vehicles over corduroy roads specially laid down in the interests of sanitary science." The report from the *Lancet* gives further confirmatory information.

We are all cognisant of cases in which death has resulted to fish under lightning; and with the effect of the Röntgen Rays and their vibrations in the treatment of cases of lupus and rodent ulcer. Perhaps electric light passed through mercurial vapour and its actinic light would do more. On one occasion I saw a strange effect produced in a tree; a pistol was fired under a thorn which was being eaten rapidly by caterpillars, and instantly there fell swarms of dead caterpillars, killed by the shock of the pistol. I have also been told that if a cannon is fired over a field which is being eaten up by locusts they stop and die. In all these cases, however, *vibrations* are the active agents. And surely if these accounts are correct, why should not a cancerous mass be singled out, and shocks passed through it? Such a mass might be isolated from other parts of the body, so that the diseased part should alone be acted on, and possibly a cure might follow.

(8) Under my sixth division I spoke of the spontaneous disappearance of cancerous growths by exposure to the atmospheric air, and this I wish to develop more fully.

These well-attested facts do not seem to have been appreciated to their full value in England. They ought to have been seriously investigated and rated at their full value. This is that oxygen kills the malignant microbes. In the *Lancet* of May 29, 1897, p. 1465, Dr. Semple, Surgeon Major in the Army Medical Staff, speaks of the effect of oxygenation on bacteria. First he refers to a paper read at Carlisle before the British Medical Association by Dr. G. Stokes, in which he fully described the use, in chronic ulcers or burns, of oxygen, by means of which he successfully treated many cases. In connection with Dr. Pinceva's

short bacteriological account, which was given in a summary, Dr. Semple, at Victoria Hospital, Netley, before the application of the oxygen, made cultures from the ulcers. They were incubated in agar agar tubes up to a temperature of 98.16° F. for twenty-four to forty-eight hours. Special notice was taken as to the effect on the micro-organisms contained. These were of two kinds—the *Rods* and the *Staphylococci*. First it was seen that the *Rods* disappeared as the process of heating continued, whereas the *Staphylococci* underwent plentiful growth. Dr. Stokes concluded from this experiment that the *Rods* prevented cure, while the *Staphylococci* continued to grow till the cure was complete. No attempt was made to classify these *Rod bacteria*. The majority were small mobile *rods*, with rounded ends, growing well in any ordinary medium, and producing liquefaction in gelatine. Dr. Semple gives seven cases, all of which were cured except *one*. The explanation may be (*a*) diminution of irritation, (*b*) direct healthy stimulation without irritation, (*c*) oxidation of the “*toxins*,” (*d*) selective power of the oxygen itself. It reminds one of the fight, I think suggested by Lister, between the *white* and *red* blood globules. If the latter are victors the wound sloughs or festers, if the former succeed the wound heals.

The *cause* of the return from disease to health points markedly to atmospheric air, and to the oxygen in that air as the curative agent. My surprise is that this result had not long since been explained and declared from the analogy of known facts. Take the case of plants; they will not grow in *all* climates, nor yet in all seasons, nor on all *soils*. Transfer them to different places; some by chance may thrive, but the majority will die. Take animals, from the smallest creature to the largest; they likewise will not live everywhere and under all circumstances—exposure for a very short time to unsuitable changes will cause their death. Is it not then a natural and logical conclusion that microbes accustomed to certain modes of life will perish when those modes are entirely changed.

But to my mind this explanation of the action of oxygen receives much confirmation from the experiments of some French scientists. We do not seem to have considered what a mighty *penetrating* power oxygen has in *insinuating* itself into or *traversing* tissues. In *Nature* (February 9, 1899, p. 346), M. Laborde, who was formerly connected with the Chemical Section of the Academy, or rather the École Polytechnique, is described as having made a mysterious communication to the Academy of Medicine in Paris. It referred to a substance which, when used in proper proportions, was capable of removing from a closed chamber carbonic acid, watery vapour, and any irrespirable products produced by a living animal in that chamber, while at the same time it automatically gave out in exchange the exact quantity of oxygen required to compensate. Two experiments were made by M. Laborde; one upon a guinea-pig whose head and neck were enclosed in a light mask, and the other upon one placed in a closed chamber. In both of these receptacles, which were air-tight, some kind of powder was placed, and life persisted. It was hoped that this powder would make the use of diving bells safe, and submarine boats much more useful. Seven or eight pounds of this substance would keep an adult alive for twenty-four hours in a hermetically sealed compartment. Even a few samples in the pocket would suffice, as these would at once yield a sufficient and compensating quantity of oxygen. But the name of the salt was not given.

The same subject was again referred to (see *Nature* of February 23, 1899, p. 390) in two communications in the *Comptes Rendus* of February 6. Messrs. Desgrez and Balthazard described some experiments made with sodium peroxide to prove this (Na_2O_2 and $\text{H}_2\text{O} = 2 \text{ NaOH} + \text{O}$). The caustic soda produced will of course absorb the dioxide of carbon. A guinea-pig weighing 400 grammes, when enclosed in 10 litres of air, was quite asphyxiated in from two to two and a half hours; but when sodium peroxide was placed in the enclosed chamber and water dropped on

it, there was no diminution of the guinea-pig's vitality even after four hours. Finally a dog weighing about 8 lb. was shut up in a closed chamber with 200 grammes of peroxide, or rather with 70 litres of air: the animal gave unequivocal signs of life at the end of six hours. In this last case the peroxide was only attacked superficially, probably owing to a superficial layer of carbonate being formed, so that the dog had not the full advantage of the peroxide.

In the discussion which followed this discovery, Mr. Arsonval pointed out that seventeen years ago he had proposed an equally effective mode to effect the same results. The animal was enclosed in a tabulated receiver, the upper part of which contained a receptacle filled with pieces of soda lime. Through the tubules a solution of hydrogen peroxide coming from a Mariotte's bottle was conducted by a tube, so as to drop in a strong solution of chromic acid. This apparatus also acts automatically. As the animal breathes and the carbon dioxide and water are absorbed by the soda lime, the pressure falls and the Mariotte bottle comes into action, oxygen is disengaged until the normal pressure is restored; then the flow from the Mariotte bottle stops and the cycle begins again.

Some twenty-five years ago the late Sir Benjamin Richardson recorded the case of a foreigner who existed under water, at the Polytechnic in London, for three hours at a time. This was no doubt accomplished by some analogous process.

The American papers have on several occasions recently been referring to a discovery by which the resuscitation of animals to life has been effected, after long intervals of apparent death. The process must be analogous to some of those above stated, and explains the great power, even under these circumstances, of oxygen to permeate the animal body.

The remarkable penetrating power possessed by oxygen and its energetic influence upon the life of animal organisms has been very fully exemplified in

experiments made by Dr. D. H. Lingle of the University of Chicago (*Phila. Med. Jour.*, 1902, Dec. 13). He found that oxygen had the power of sustaining the action of the heart, and would keep strips of muscle removed from the heart of a turtle beating for from twenty-four to seventy-two hours; in fact until dissolution (? putrefaction) set in. This effect of oxygen was formerly attributed to its purifying action upon the blood, but Dr. Lingle shows that the stimulation of the heart by oxygen causes rhythmic beating (*Brit. Med. Jour.*, Ep., 1903, May 10).

(9) From the results obtained of the curative character before referred to, I had concluded the cause of cure was the exposure of the abdominal cavity to oxygen let in with the atmospheric air. Reasoning on similar premises, Dr. Horschfelden thought that if the air admitted had this curative effect, it was due to an *antitoxin* thereby formed. Why not, therefore, said he, try the effect of oxidation on tubercular matter out of the body, and thus produce an antitoxin? So for this purpose he used the peroxide of hydrogen (H_2O_2). It was prepared in this manner: 60 cc. of tuberculin was mixed with 240 cc. of a 10 per cent. solution of peroxide of hydrogen in a well-stoppered bottle, and the mixture was sterilised by exposure to heat of steam for ninety-six hours. The fluid then became opaque and acid. It was now cleared by a solution of caustic soda; 5 per cent. of boric acid was then added, and after filtration became fit for use.

This tuberculin is not the same as *Koch's*, but is prepared after Dr. Horschfelden's own method. Bacilli of high virulence are cultivated in a *veal* broth, with 4 parts of *glycerine*, 1 part of Witt's *peptone*, 0.5 per cent. of chloride of potassium, 0.3 per cent. of carbonate of soda. But large cavities in the lungs are sometimes due to other kinds of bacilli, and these last require a *different* kind of antitoxin for their destruction. This is effected by taking the sputa of phthisical patients and treating it in the same way as the kind first mentioned—tuberculin. By way of

distinction he calls the first *oxytuberculin*, the second he calls *oxypepsin*. It may be administered in large quantities. As a rule, 20 grammes of *oxytuberculin* and 10 grammes of *oxypepsin* should be injected. The disease, he says, soon disappears. Horschfelden has so treated eight cases. He is trying the treatment in carcinoma, but as yet his cases are not sufficient to generalise on the subject.

Yet once more. In the *British Medical Journal* (November 8, 1898, Epitome, p. 75) we have another example given of the influence of oxygen when injected into the body. It is to this effect, that ascites or abdominal dropsy can be often cured by injections of oxygen. This discovery was made by M. Maignot in his *Thèse de Lyon* in 1898, *i.e.*, by the injection of *sterilised* oxygen. This method was tried in connection with cases of peritonitis. Reasoning from examples like those given at the beginning of this paper, of the cure of several varied and abnormal abdominal tumours when air was admitted into that cavity, he asked himself, Why not use, not air, but pure oxygen? He found that doing this was useful not only in ascites from tubercular peritonitis, but even in abdominal dropsy from cirrhosis with contraction of the liver. After several experiments he concludes that from one to two litres of oxygen should be injected each time. Larger quantities, from five to six litres, are less well borne. With the smaller quantity there is very little trouble; the temperature may rise 0.3° to 0.4° , and be accompanied by small spasms or discomforts, which, however, disappear in twenty-four hours. It is well to apply a little pad over the aperture made.

(10) But antitoxins can be prepared by *electricity*, and this is a point of great value. The old plan was to bring up a horse to a patient affected with poisoned blood, and take from it serum of a proper pitch to be used as the medium of preparing antitoxin. Dr. Swinnow hit upon a better way of doing so, which is both less costly and less cumbersome. This method is *electrolysis*. This had no

effect upon the horse serum in the way of injury. When applied to virulent *diphtheria* in broth cultures the results were very encouraging. This antitoxin was found to have undergone a change, and to have become of great power, even when employed in small quantities, and entirely protected the animals experimented upon by it from diphtheric poison.

It has been tried in many cases, in dogs—animals which are very liable to diphtheria—and, what is more, if given to persons who are suffering from diphtheria, a smaller dose hastens the cure. In itself it appears to be quite harmless, for it has no effect on guinea-pigs, who can take doses ten times greater than needed for medical purposes. It takes only one day, if you have the proper supply of broth, to prepare the electrolysed antitoxin (see *Archives de Science*, issued by the Imperial Institute of St. Petersburg, No. 5, 1896).

(11) *Crushing the Living Organism Effectually*.—The latest plan devised for the destruction of the so-called bacteria has been published by Dr. Allan McFadyen. It is true it refers to typhoid fever, but it is easy to see how it could be applied even more successfully to cancer. Dr. McFadyen refers to the usual plan of incubation with a pathogenetic substance in order to obtain a protective serum, which is usually brought about by the injection of a medium containing the bacteria themselves. But Dr. McFadyen has found that by crushing the bacterial cell it is possible to remove the contained poisonous *juice*—the real source of the disease. For if inoculation be made with the living bacteria the organisms are able to multiply themselves, and so the poison continues beyond the experimenter's control. The juice, however, cannot produce or multiply bacteria. At the very low temperature at which air liquefies, vital action becomes practically non-effective; and so by immersing the bacteria in liquid air it is possible to crush them to such a degree that they cannot revive, even when brought up to the ordinary tempera-

ture. By inoculation, then, with this devitalised poison you cure the disease. It is obvious that what can be done for typhoid fever applies to other bacterial poisons. Many experiments have now been made by inoculation of this devitalised poison, and the results tend to confirm Dr. McFadyen's belief. To illustrate this result, let me tell you that in Canada, where during the winter season the thermometer may fall to 45° F. below zero, I have seen a mortar for firing shells, the thickness of which might be 8 to 10 inches, filled with water, and when the aperture was hermetically screwed up at night, in the morning the mortar was completely split by the frozen water, now become dilated ice. This proves that ice has a most powerful crushing power.

Conclusions.

What, then, are the plans I venture to recommend? and I do so with a small share of timidity in the presence of our President and Dr. Snow, and many other distinguished cancer operators, because with their opportunities and experiences they ought to know best. Still, I think there are things to be done which have not yet been done. An overlooker may detect errors in a game of chess which the players have not noticed, although as an outsider he may be less experienced.

First, a system of perfect drainage, not merely local but extending over the whole city. What is the use of draining the West End and not the slums in the East End? The tables of mortality for all diseases show that drainage to be effectual must be universal. I know of no method so easy as the electrolysation of sea water, which was shown by Hermite, of St. Adresse, near Havre. Sea water exists in abundance and inexhaustible quantities. When electrolysed it gives out oxygen and chlorine in abundance, and drains, poisonous by their stench, become sweet and clean; the very black walls of the drain itself becoming as

white as if new. The flushing of drains by this method insures their purity. The cost for entire London has been estimated at £5,000,000. All this I have explained in my pamphlet on the "Water Supply in London." Electrolysed sea water, if used, instead of the ordinary water, to water the streets, to afford salt baths, and to extinguish fires, would have the added advantage of leaving a larger supply of the usual water service available for drinking and domestic use.

Secondly, the employment of oxygen freely in the body in various ways, so as to render the injurious effects of the organisms inoperative.

Thirdly, experts are needed to prove how electricity, by shock or vibrations, may insure the destruction of the organisms.

Fourthly, means must be devised to apply the crushing system by ice from liquid air or hydrogen through some effective apparatus.

Two Cases.

I first saw Mrs. S. as an ordinary patient in 1878. She was mostly labouring under leucorrhœa and ulcerations of the cervix, with retroversion, tending to vaginal prolapse. The ulceration in her case was very obstinate. However, she got better, and then a constant soreness occurred in the left labium; that was easily cured, but it always recurred at long intervals. Her husband died, but she did not improve in health. Every now and then the London water, used as a douche with iodine and lead in small quantities, seemed to irritate her. She left me to go to Shrewsbury, and then returned to me free from all ulcerations whatever. Her idea was that the Shrewsbury water was more healing. I forbade her to use London water unless it had been boiled, and thenceforward there was no vaginal soreness. After a long absence she called upon me (May 17, 1899), being poorly, with extensive ulceration and

bleeding from vagina: she had been again to Shrewsbury. There she was quite well; but on returning to London the same symptoms had come on from carelessness on her part; the ulceration had much increased, and on each side of the os there was a cocked-hat shaped tumour, about 1 inch in length, smelling horribly and bleeding on touch, with a copious muco-bloody discharge in the vagina, and much pain. I concluded it was cancer. I was much disconcerted, but I determined to try the effect of oxygen. After washing out the parts thoroughly, I applied a large plug of cotton dipped in a fresh undiluted solution of peroxide of hydrogen. This was to be kept *in situ* twenty-four hours, and then an injection, ʒiij. of the same solution to ʒiij. of water, used three times a day. I saw her a week after, and the tumours had nearly entirely disappeared. All smell, pain, and blood had disappeared. In fact, from this time up to July 15 she improved daily, and was practically cured, no trace of disease existing, though she was put upon a preparation of iron to strengthen her. She is now (July, 1902) quite well, having only had some rheumatic attacks.

Miss L., aged about 20, came to me in 1885 for uterine disease, and again applied to me in 1890, when she was very ill, with an offensive discharge, great backache, and much pain when unwell. Vaginal examination very painful. Left ovary also about size of an egg; retroversion. These symptoms were very obstinate, continued for a long while, and recurred from time to time. She had a sharp attack about four years ago in the country, and then it was found that the right ovarian region was the seat of a growth. My son, Dr. Armand Routh, operated on this case, and removed a large portion of a malignant papilloma, but a portion had to be left behind. She seemed for about a week to be making good progress, when she was attacked by influenza, which passed on to empyema, and eventually paracentesis thoracis became necessary. However, she recovered well. Evidence of activity of the

growth in the right side of the abdomen persisted for some months, though it did not regain its former size. Simple measures were used. Her general health improved, but still signs of the papilloma remained, with a leucorrhœal discharge. I ordered liq. peroxidi hydrogenis as a douche, and from that moment she improved, and now all traces of the papilloma have disappeared, and she goes about quite well.

DISCUSSION.

The PRESIDENT said they must all thank Dr. Routh for his very suggestive paper. There was much in it to discuss with regard to the influence of locality upon cancer, its heredity, and its possible origin from a parasite, and as to the various methods he had proposed for the possibility of its cure. One of the most interesting points referred to was the fact that cœliotomy had in some instances been performed for disease that inspection had shown to be undoubtedly malignant, yet the patient had done well and the disease, which could not be removed, had afterwards disappeared. It was an extremely interesting question to know what the factor was which effected the cure in these cases. There was also the question as to whether vibrations, either ordinary or electrical, could be beneficially employed in the treatment of cancer. Experiments made in this direction had been reported, and it seemed possible that by means of such vibrations some amelioration of that terrible disease might yet result.

Dr. HERBERT SNOW said that all the investigations of cancer commissions, and almost all articles in the medical journals, were vitiated by the fallacy of using the word "cancer" in the very vague sense of a single disease. There were a large number of forms of malignant disease due to different causes and exhibiting different clinical phenomena. It was, for instance, a great mistake to confuse under the one term "carcinoma," Carci-

noma in which the blood current and distant viscera were infected, with Epithelioma, which very rarely indeed passed beyond the glands. Connective tissue sarcoma, the melanotic form starting in the skin, lymphosarcoma, and various other forms were all talked of as "cancer," but the first thing to obtain any clue to the origin of cancer was, in his opinion, to differentiate all the forms of malignant disease, and, as far as possible, examine each one separately. There were several important statements in the paper just read with which he could not agree. Cancer was said to be *hereditary*. Some years ago, he had himself published 1,000 cases in which this point was carefully investigated, with the conclusion that cancer was no more hereditary than the toothache, that as many cases occurred in persons without any family history of the disease as otherwise, and that every single case had its definite exciting cause, whether there was a family history of cancer or not. That view had been amply confirmed, and was the one now generally accepted by practising surgeons, and it was hardly too much to say that the hereditary theory was obsolete. Again, as to cancer being *communicable*, he thought it must be very rarely so, and was not aware of a single well-authenticated case. He had known instances of husband and wife, one of whom had contracted cancer after the other, but so far as he could discover, the forms of the disease were different in every instance, and as there was always an exciting cause, there was no reason to suppose the disease was communicated. The statement that certain *localities* favoured cancer was open to the objection that in the so-called "cancer-house" cases different types of the disease were met with. He did not believe that genuine malignant disease ever disappeared spontaneously. At a meeting of the Society some years ago, abdominal cases such as those mentioned by Dr. Routh were criticised by one of its most distinguished Fellows, and he showed that the cases were not malignant, and that the operators had been mistaken. Dr. Routh evi-

dently inclined to the belief that the cause of cancer was a micro-organism. None of the able men who for years had been trying to discover such an organism could set aside the difficulty that if malignant disease was due to a parasite, the action of that parasite in causing the duplication in distant parts of the histological structure of the tissues at the original seat of the disease, mammary tissue in the liver, for instance, or rectal tissue in the lung, behaved in a way totally different to any other parasite known as the cause of disease. The proposal to destroy micro-organisms by electrical or other vibrations was, of course, based on the idea that cancer was due to a parasite, but in his opinion there was the strongest presumption that it was not so. He had been familiar with peroxide of hydrogen for years, but had not found it to be superior to iodine, and he did not think much was to be expected from it in malignant disease.

Dr. BEDFORD FENWICK said that about sixteen years ago the communicability of cancer was attracting much attention, and ever since that time he had made careful inquiries of every woman suffering from malignant disease that came before him—and he had seen a very large number of these—as to her surroundings and her husband's condition. In no case had he found that the disease had been communicated, in very few was there any ground for supposing it to be hereditary, and he could only recall one in which a previous occupant of the patient's house was known to have suffered from malignant disease.

Mr. SKENE KEITH supported Dr. Snow's remarks on the numerous varieties of cancer by pointing out that, in quite typical cases, the disease would kill one patient in six months and yet not be fatal to another for two years or even longer; an operation which might be suitable for one patient would be quite out of place in the other case. He had no doubt that cancer was hereditary, that is to say, that a tendency towards it existed in certain families; there was difficulty in obtaining a history of it as, especially

in the North of England, its existence was looked upon as a disgrace. If the disease were communicable he thought there would have been more cases recorded; the fact that husband and wife occasionally were found to suffer from the same disease was not a proof that it had been communicated from one to the other. Dr. Routh had offered an explanation of the cause of cancer, and upon it had suggested certain lines of treatment; but it seemed to him (Mr. Keith) that the true explanation was more likely to be arrived at after a cure for the disease had been discovered. Dr. Routh had said that cancer might disappear, and he (Mr. Keith) had met with instances of such disappearance, and therefore must differ from Dr. Snow on this point. The only reply those who denied such disappearance had to make to abdominal cancer vanishing after incomplete operation was to say that the operator had been mistaken in his diagnosis.

Dr. MANSELL MOULLIN could not admit that papilloma was malignant; it certainly was not so in its early stages, and he cited a case in which after removing papillomatous ovaries, when he had occasion to reopen the abdomen four years later he found no trace of papilloma whatever.

The PRESIDENT mentioned a case in which, about thirty years ago, he removed the ovaries from a girl, aged 14, for cancer, and four days later he performed ovariectomy on a woman in whom the peritoneum was perfectly healthy, and that woman died within two months of malignant disease of the abdomen. He was perfectly certain that at the time of the operation there was no trace of such disease, and in his opinion the only explanation was that the cancer had been communicated to this woman from the previous case.

Dr. ROUTH, in reply, said that as the basis of his paper he had simply selected the points on which he thought the evidence was the more convincing, as regarded the many questions in connection with cancer upon which opinions varied and which were still unsettled. As to its

being hereditary, if a family took up their residence in some particular place and one member of it after another suffered from cancer, he should not advance that as a proof of the disease being hereditary; but the matter was quite different when we saw this fatal disease running through four or five successive generations of one family. The evidence that cancer favoured certain localities, and that the term "cancer houses" was justifiable, seemed to him to be convincing on account of the careful researches that had been conducted by men of known reliability and character. He was sure that in peroxide of hydrogen they had a beneficent agent which had been too much neglected; a distinguished Russian professor had reported the cure of six out of seven cases by its use.

ON THE TREATMENT OF HÆMATOCOLPOS AND HÆMATOMETRA. By J. A. MANSELL MOULLIN, M.D., Physician to the Hospital for Women, Soho, and to the West London Hospital.

You will have noticed, I am sure, one fact which attends every operation case brought before this Society—recovery is invariable and always uneventful. Now this constant repetition is apt to be somewhat nauseating, and as I am fully convinced very often more is to be learnt from one case of failure than from ninety-nine which make an uneventful recovery, and are of no interest to anyone but the operator, I shall record a case which did not recover.

The patient, a girl aged 16, was admitted into the Hospital for Women in July last with all the symptoms of hæmatocolpos and hæmatometra. She was a feeble subject with angular curvature of the spine in the dorsal region.

A tender swelling occupied the lower part of the abdomen, extending half-way to the umbilicus. Examination showed the vulva well developed, but there was practically no vaginal cul-de-sac. By the finger in the rectum

a tense swelling continuous with the abdominal mass could be felt occupying the pelvis. I decided to empty the contents of the cyst, and as the hospital was shortly to be closed for cleaning, to re-admit her later on for any further operation should it be necessary. For this purpose I made a transverse incision in the posterior fourchette, and partly with the knife and partly with the fingers carried the dissection to a depth of between two and three inches, and then with a trocar tapped the presenting cyst. A large quantity of dark-coloured blood escaped, and when this ceased to flow the cavity was carefully flushed out with an iodine douche. I dilated the opening sufficiently to admit two fingers and inserted a glass dilator. The opening was douched three times daily, and later on a rubber tube substituted for the glass dilator.

The patient was re-admitted in October. She had not seen anything since her discharge in July. She had suffered considerable pain in the lower part of the abdomen, and on two occasions, in August and again in September, had had attacks of severe colicky pain.

No trace could be found of the previous operation. Examining bimanually with the finger in the rectum, I found an enlargement of the uterus, or at any rate, a mass of considerable size, and believing that there had been a re-accumulation of menstrual fluid I decided that the only treatment likely to be of permanent benefit was the radical one of removal of the uterus.

The temperature was somewhat irregular, touching 100° F. on three occasions during the fortnight previous to operation.

On October 16 I opened the abdomen, and after breaking down some adhesions removed a tubo-ovarian abscess on the right side. The appendages on the left side were absent. I could find no trace of either tube or ovary. After stripping down the bladder and securing the arteries on either side, I amputated the uterus at the level of the

inner os. This was followed by a gush of foul-smelling fluid through the divided cervical canal. There had been no re-accumulation of menstrual fluid, but the contents of the vaginal sac were septic. Passing a large bougie down through the cervical canal I had no difficulty in opening up the tract of the previous operation, and, withdrawing the bougie, I inserted a large drainage-tube, the end of which appeared at the vulva. After carefully washing out the peritoneum the edges of the stump were united with catgut, and the operation concluded in the usual way. The condition of the patient was unsatisfactory from the first, and she succumbed three weeks later. There is no reason why, had hysterectomy been performed in the first instance, the patient should not have made a good recovery.

Hæmatocolpos does not occur with sufficient frequency to give any man a large experience. Consequently we have to make the utmost use of the material to hand, and for this reason I have ventured to bring this case to your notice this evening. It would be a step of the utmost practical value if we could formulate some rule for future guidance.

The different effects produced by atresia according to its position in the genital canal are well illustrated by diagrams in Sutton and Giles' "*Diseases of Women.*" For practical purposes it is obvious a great difference exists between those cases in which the atresia is found at the vaginal orifice, and those in which the vagina is to a greater or less extent wanting.

In the former case nothing in surgery is more simple. A free incision in the obstructing membrane allows the contents to escape. When the greater part of the fluid has been evacuated, gentle douching may be employed to wash out the residue, and prevent decomposition from taking place. The same treatment is required when the obstructing membrane is found at the cervix. Sepsis is the great danger to be feared. To minimise the risk the evacuation of the retained fluid should be complete, and

a 1-5,000 douche of hydrarg. perchlor. used for some days afterwards.

We seem unable to free ourselves from the influence of an obsolete and out-of-date gynæcology. On referring to a recent text-book, I find it stated that the second great danger to be feared on setting free the retained fluid is "the occurrence of uterine contractions, which may cause a retro-flow of the fluid through the Fallopian tubes." To prevent this it is recommended if the uterus be distended and the atresia situated at the cervical canal, to draw off not more than one-third of the fluid on the first occasion. This to be done with an aspirator. A week may be allowed to elapse before a repetition of the aspiration, and this careful emptying of the uterus may be prolonged as long as there is any fluid to withdraw. The vagina must be well tamponed after each operation.

This proceeding appears to me to be simply courting sepsis; moreover, a retro-flow of the fluid into the peritoneal cavity is an absolute impossibility. The very retention of the fluid in the first instance implies a closed sac, closed at the upper extremity as well as the lower, and any uterine contraction will only expedite the flow of the fluid in the direction of least resistance. The more free the exit, the less the danger. When hæmatocele was still an unfathomed mystery it was regarded as the result of menstrual regurgitation due to atresia, or in some unexplained way connected with menstrual suppression.

When the vagina is partially absent, the difficulties to be encountered are much more formidable. In the first place it is necessary to make a dissection between the urethra in front and the rectum behind, and to carry it deeply in the direction of the septum before the blind end of the vagina is found; and we are then met with a still greater difficulty, to keep the opening patent after it is made. Again, old-fashioned gynæcological notions bar the way and hinder progress to a clear understanding of the subject. The idea that a more or less perfect artificial vagina can be made by plastic procedures, if only the

operator is clever enough, probably prevails throughout the greater part of the profession. It is simply a surgical impossibility. When the atresia is the result of injury, and situated superficially, a plastic operation may be of some use, but an artificial vagina is not a rational proposition.

I think, therefore, we may safely assert that, when a dissection is found necessary to reach the sac, the vaginal route should be abandoned altogether, and that the abdomen should be opened, the sac incised, and after flushing out the retained blood, its walls attached to the parietal incision, or better still, the body of the uterus removed at the level of the inner os and the stump returned into the peritoneal cavity.

On the necessity to maintain the patency of the orifice, Sutton and Giles ("Diseases of Women") remark, "This is often a very troublesome performance, and not infrequently so difficult and even impossible that it is in some cases necessary to produce an artificial menopause by oöphorectomy or hysterectomy." This statement, I think, supports the course I adopted in my own case. It does not appear to me to go far enough. In all such cases I should remove the body of the uterus as a primary proceeding. The disadvantages of a secondary operation I have already fully exemplified.

In the light of modern gynæcology I think we shall agree that if either of these operations, oöphorectomy or hysterectomy, have to be performed, the latter, hysterectomy, is the preferable proceeding, not oöphorectomy. The ovaries are important organs, and the patient, always a young girl, is certainly in a better position if she can retain them.

An interesting case of Dr. Christopher Martin's is recorded at length in Dr. Macnaughton-Jones' excellent work. The operator appears to have made no attempt to reach the fluid from below, but at once opened the abdomen, incised the uterus, and washed and sponged out its contents. The cervical stump was then fixed in the lower part

of the incision, and a glass drainage-tube passed through the gaping cervix to the bottom of the sac. The cervical canal for some time exuded a little glairy mucus.

It appears to me it would be better still to complete the operation as a subperitoneal hysterectomy. It is true a small closed sac would be formed below the cervix, but there is no reason why it should give rise to trouble. The very good results now obtained from this operation for fibroid tumours, &c., lead me to hope that it may be advantageously employed also in these cases of hæmatocolpos and hæmatometra, the treatment of which has hitherto been most unsatisfactory.

The PRESIDENT drew attention to the great difficulty that was encountered when such deep dissection was required as in the case just reported, and commented upon the disinfectant that had been employed.

Dr. SNOW said that he had some years ago come to the conclusion that the tendency to suppuration in any cavity was greatly increased by syringing out that cavity with antiseptic solutions, and had therefore abstained from the practice in all cases where sloughing was not actually present. The correct principle was to keep all operation wounds as dry as possible.

Dr. BEDFORD FENWICK said that with such a splendid record of success as Dr. Mansell Moullin possessed, there was no reason for him to hesitate to report a single failure. After extensive dissection in the tissues between the bladder and the rectum a granulating surface was necessarily left and the opening had a constantly increasing and natural tendency to close; and he therefore thought that the immediate removal of the contents of the sac was clearly indicated when there was no vaginal canal through which the blood could be drained. He concurred with Dr. Mansell Moullin's classification, and thought the removal of the uterus was the best course to be adopted in the absence of the vagina.

Dr. MANSELL MOULLIN having briefly replied, the meeting terminated.

NEW FELLOWS.

ON the nomination of the Council of the Society, and after election at the meeting of July 9, 1903, the following distinguished names have been added to the list of Honorary Fellows :—

G. von Rein, M.D., Professor of Obstetrics and Gynæcology in the Military Medical Academy, St. Petersburg.

Vladimir Fedorovic Snegirev, M.D., Professor of Gynæcology and Pædiatry, and Director of the Frauenklinik, in the University of Moscow.

Luigi Mangiagalli, M.D., Professor of Obstetrics and Clinical Midwifery, and Director of the Obstetric Clinic in the University of Pavia.

Ottavio Morisani, M.D., Professor of Clinical Midwifery and Director of the Obstetric Clinic in the University of Naples.

C. Jacobs, M.D., Agrégé à l'Université, Professor of Gynæcology at the Policlinic, Brussels.

The following practitioners have been elected Ordinary Fellows :—

Jeremiah H. Stealy, Ph.D., M.D., Jefferson Medical College, Pa.; Freeport, Illinois, U.S.A.

R. Wybauw, M.D.Brux., Agrégé à l'Université; Spa.

Ernesto Pestalozza, M.D., Professor Obstetrics and Gynæcology in the University of Florence.

Gilbert Taylor Beaton, M.D., C.M.Edin., Bradford.

Elizabeth Bielby, M.D.Berne; Lahore, India.

Holland John Cotton, M.D., C.M.Edin., Lowndes Street, S.W.

Gibbon Fitzgibbon, M.D., B.S.Dub., Rotunda Hospital, Dublin.

Frederick C. Peterson, M.D.Buffalo; Syracuse, U.S.A.

THE NURSING EXAMINATION OF THE SOCIETY.

It will be remembered that the British Gynæcological Society at its last Annual Meeting determined to hold Examinations and grant Certificates in Maternity Nursing and in Gynæcological Nursing. The scheme was entrusted to a very Representative Board of Examiners, who have now organised and commenced the work, the first Examination for both Certificates being held in June. The written papers were answered by June 4, by Nurses in different parts of the country, under the supervision of their Hospital Matrons, and on the 18th all the candidates attended in London for their *viva voce* examination.

Eight Nurses presented themselves for examination, of whom the following were successful in obtaining the Gynæcological Nursing Certificate :—

Miss Ellen Edith Fowler, cert. St. Mary's Hospital, London (three years).

Miss Hannah Sadleir, cert. Royal Free Hospital (three years).

Miss Minnie Rowell, cert. Guy's Hospital (three years).

Miss Gertrude Taylor, cert. Crumpsall Infirmary, Manchester (three years).

Miss Bertha Jobson, cert. Birmingham Infirmary (three years), and also cert. Midland Hospital for Women (three years).

Miss Agnes Barclay, cert. Wellington Hospital, New Zealand (three years).

The following Nurses also obtained the Maternity Nursing Certificates :—

Miss Sadleir, L.O.S.

Miss Rowell, L.O.S.

The written papers were as follows :—

GYNÆCOLOGICAL NURSING EXAMINATION PAPER.

(1) What preparations would you make for a case of abdominal operation you have been engaged to nurse :

(a) of the room ; (b) of the patient ; (c) of yourself ?

(2) What would you have in readiness for such a case :

(a) for the use of the operator ; (b) for the use of the patient ?

(3) What dangers may follow the operation for ovariectomy from the time the patient is placed in bed until the end of the fifth day ; what symptoms would give rise to anxiety ; and at what time would they be likely to occur ?

(4) Describe the nursing which is required in the case of an operation for ruptured perinæum.

(5) What methods would you employ in sterilising instruments and dressings for an operation in a private house ?

(6) How would you prepare a patient for amputation of the breast ; and what dressings and bandages would you have in readiness ?

MATERNITY NURSING EXAMINATION PAPER.

(1) What preparation would you make for a case of impending labour you are engaged to nurse : (a) of the room ; (b) of the patient ; (c) of yourself ?

(2) In such a case, what would you have in readiness (a) for the use of the doctor ; (b) for the mother ; (c) for the infant ?

(3) Describe the various methods of dressing the umbilical cord. Which in your experience is the best of these, and why ?

(4) Describe the general care of the breasts when it is necessary to prevent lactation after a confinement ?

(5) After a confinement, what symptoms during the first nine days would you consider sufficiently grave to make you send for the doctor ?

(6) Describe fully your method of giving a bath to a newly-born infant.

*ORIGINAL COMMUNICATIONS.*THE CONSERVATIVE TREATMENT OF LESIONS OF THE
UTERINE APPENDAGES.¹

By GEORGE GRANVILLE BANTOCK, M.D., F.R.C.S.Ed.

THE Conservative treatment of lesions of the uterine appendages has been the theme of discussion for several years. The question has been looked at from two different standpoints. The first is based on the desire to avoid the necessity for a second operation by removing the organ on the suspicion of disease in a very early stage. The second has in view the idea of treating the suspected organ so as to render its retention possible by arresting the disease. Both are acts of conservative surgery, although, in appearance, diametrically opposed to one another.

In the first instance it was maintained, as the result of experience, that if one ovary were diseased the other was very liable to be attacked.

The argument was fortified by the frequency with which every extended list of ovariectomies showed a double operation in which the evidence of disease was unmistakable. This was especially liable to occur in the case of the colloid tumour. My own list shows this in a marked degree; for in a very large majority of the cases of this kind the second ovary was already characteristically affected, and in one instance I had to perform a second operation within three years.

The same argument was used in the case of the Fallopian tube with even more weight, and it was strongly held by

¹ Read (in Spanish) before the International Medical Congress in Madrid, April, 1903.

the late Mr. Lawson Tait, that in the case of ectopic gestation it was the duty of the surgeon to remove both the tubes to prevent a similar occurrence in the other tube. He was able to support the argument and practice by several examples of this occurrence.

When one Fallopian tube is the seat of the inflammatory process it is very rare that the other tube is free from the evidence of disease, and therefore the operation is usually double. Nor is it difficult to understand why this should be so. The Fallopian tubes are continuous with the uterus not only by contiguity, but also by continuity of structure, both as regards their tissues, cavities and vascular supply, and there is no evidence to show that inflammatory disease arises in the tubes without a corresponding condition in the uterus. No case of salpingitis or pyosalpinx has, to my knowledge, been recorded, without the existence of the inflammatory process in the uterus at some time preceding the development of this condition.

According to the doctrine of to-day, salpingitis is brought about by the passing of microbes from the uterus into the tube by continuity of way. It is scarcely necessary for me to say that I do not accept this view, regarding it as a mere assumption based on the doctrine of the microbic origin of disease, which I have elsewhere shown to be untenable.¹ Be this as it may, clinical observation confirms the view I have stated above as to the implication of the two organs—uterus and tube—when the latter is found to be diseased. If, then, in operating on a case of ovarian cystoma, we find the second ovary presenting distinct evidence of disease, it is an act of true conservative surgery to remove that organ. In my opinion this practice is applicable, and with equal force, to the case of the Fallopian tube. On the other hand, the second principle of treatment, as I have said, has in view the treatment of the suspected organ, so as to arrest the disease, and to

¹ "On the Importance of Gonorrhœa as a Cause of Inflammation of the Pelvic Organs," *Brit. Med. Journ.*, April 4, 1891, and "The Modern Doctrine of Bacteriology, or the Germ Theory of Disease."

render the retention of the organ possible. The principle is the same whether we employ the method of ignipuncture or excision of the suspected part.

Now, it is a difficult thing to say, at the earliest stage, whether an ovary is diseased or not. To this class especially has this treatment been directed, and I am not at all satisfied that the basis is a sound one. It is all very well to point to a limited number of cases in which impregnation has followed this operation. This very fact appears to sustain my objection that these organs were not the seat of any disease at all. In many cases of ovariotomy I have been in considerable doubt as to the condition of the second ovary, but only once have I put this practice into force, by evacuating a large Graafian follicle, which was probably on the point of bursting. What the final result was I have never heard. But I certainly could not find any argument in favour of the proceeding on such a case. On the other hand, I have often been in considerable doubt, especially in the cases of young married women, and have abstained from interference, with the happiest results. I recall one case in particular in which, after having removed a dermoid tumour of about 3 lb. in weight, the condition of the other ovary was such as to raise in my mind the gravest apprehension until, some months after, I heard that she was pregnant. This patient continues free from disease. It is a remarkable fact that in those cases in which I have had to operate a second time there was not the slightest suspicion of disease at the time of the first operation. The intervals varied from eighteen years, eleven (in which case the woman bore twins, one of each sex, within eighteen months) and three years down to one year.

There is a third point of view from which this question may be considered, viz., the idea that the ovary is the source of an internal secretion which is of use in the economy, and that, on this account, one ovary, at least, should be left behind in cases of complete hysterectomy. It is said that this practice renders the menopause more

easy. I venture to repeat here what I have elsewhere said more than once, that there is not a particle of evidence to support this view of an internal secretion. It is merely an effort of the imagination. On the other hand, experience tells that the menopause is not beneficially affected. I have recently put on record a case of ovariectomy seven years after complete hysterectomy.¹ In this case both ovaries, which appeared to be perfectly healthy, were left behind. Yet the symptoms of the menopause were unusually severe and protracted. This fact and the occurrence of disease so many years after furnish a strong argument against this practice. The idea has been handed down to us from the time when the pathology of the sexual organs was in a state of chaos, that at the "change of life" the woman must necessarily suffer. Careful investigation, however, shows that the majority of women do not suffer any inconvenience, and that whatever symptoms may be present are due to the arrest of menstruation.

As regards the condition of hydrosalpinx and the operation of salpingostomy, my own experience is not favourable; nor does it appear that the general results of the operation give any support to the practice, when we consider that, for the production of a hydrosalpinx, occlusion of both ends of the tube is necessary, and that while it may be quite feasible to restore the patency of the infundibulum, yet the opening up of the uterine end is not so easy of accomplishment. For this purpose the late Dr. Mundé proposed catheterisation of the tube into the uterine cavity, but his results do not appear to support the practice, and it is not reasonable to suppose that a single catheterisation, even if it were practicable, could effect a cure.

Long experience has taught me that the ovary is usually regarded as the seat of disease (inflammation) when a patient complains of pain in the region of that organ. Hence we hear a great deal of acute and chronic ovaritis.

¹ *Brit. Med. Journ.*, January 17, 1903.

I am convinced that the uterus is, in these cases, the true "*fons et origo mali*," and that the pain is reflex. This is confirmed by the fact that inspection of the uterus shows it to be congested, and that when this is subdued the pain ceases. It is very rare that the pain of uterine congestion is referred to the uterus itself, and when the sound is passed into the cavity or the cervix is struck by the finger in examination, we have a sure means of determining the source of the pain. Moreover, in these cases the ovary is not more tender than usual.

A word of protest against that mania for operating—the *cacoethes operandi*—which characterises the gynæcological surgery of the present day. I have rescued from operation a considerable number of cases in which the patient had been condemned to suffer the loss of her uterine appendages on account of some supposed disease of the ovaries—one or both. All these patients are now alive and well, and some of them have borne children—one as many as four. I have also seen many cases in which the clinical evidence pointing to severe inflammatory disease of the appendages was overwhelming, and in which the signs and symptoms all disappeared under appropriate treatment, and I cannot but believe that many cases are operated upon without sufficient justification. I therefore draw the following conclusions :—

(1) That in the course of an ovariectomy it is true conservative surgery to remove the second ovary if it show palpable disease.

(2) That in the case of ectopic gestation or of salpingitis, either acute or chronic, it is advisable in the great majority of cases, if not in all, to do the double operation.

(3) That the practice of ignipuncture or partial resection of a suspected ovary is not founded on specific data.

(4) That it is not true conservative surgery to leave an ovary in cases of complete hysterectomy.

(5) That the operation of salpingostomy seems to me to have no claim to be regarded as an operation worthy of acceptance.

From the Frauenklinik of the University of Halle
(Director, Professor Dr. Ernest Bumm).

THE VALUE OF THE ABDOMINAL RADICAL OPERATION IN
THE TREATMENT OF UTERINE CANCER.

BY K. FRANZ, M.D.

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Privatdozent of Obstetrics and Gynæcology in the University of Halle ;
Fellow of the British Gynæcological Society.*

I HAVE much pleasure in acting upon the friendly invitation given me by Dr. H. Macnaughton-Jones to contribute an article to the BRITISH GYNÆCOLOGICAL JOURNAL, and have taken the importance of the abdominal radical operation in the treatment of uterine cancer as the subject of this essay to make more widely known what has been done in America, France and, especially during the last three or four years, in Germany, to improve the operative treatment of carcinoma of the uterus.

In former years this treatment was strictly limited to the vaginal total extirpation of the uterus, but now the radical abdominal operation is performed not infrequently. By this radical abdominal operation I mean the removal of the uterus, with part of the vagina, and some of the pelvic connective tissue and the associated lymphatic glands, after laparotomy. I know that English operators perform the radical abdominal operation very rarely indeed, and that some of them are entirely opposed to it. I need only mention Professor Japp Sinclair, who said last year at Manchester, "I have no hesitation in saying that a large portion of the extended radical abdominal hysterectomies for cancer are homicidal vivisec-

tions, which nothing hitherto advanced in their support appears to palliate, much less to justify."

I venture to hope that this article may contribute to a more adequate recognition of the value of the radical abdominal operation and to the realisation of its practical importance.

Statistics show that 10 per cent. of the women who seek medical help on account of carcinoma of the neck of the womb are permanently cured by total extirpation of the uterus by the vagina, that is to say, they remain free from recurrence for five years after the operation. Permanent cures of cancer of the body of the womb amount to about 60 per cent. ; but cancer of the body of the womb occupies a position quite apart and differs entirely in its clinical symptoms from cancer of the neck, and does not in any way come within the purpose of this article.

The above-mentioned proportion (10 per cent.) of permanent cures includes all cases of cancer of the neck of the womb which come under medical care. To make this clear, I may point out that of 100 women with carcinoma colli uteri, 40 may be treated by vaginal total extirpation, but the remaining cases are past operation. Of the 40 operated upon, 30 will suffer from recurrence within five years of the operation, while the remaining ten may be considered permanently cured. The figures in this example correspond very closely with the actual facts. Moreover, statistics show that for the most part the recurrence of the disease is local, and the glands are affected in only a minority of cases. Of the local recurrences, more than one half are remains of the disease, which it was found impossible to remove, or which were left behind because undetected at the time of the operation. The operations in such cases, therefore, were incomplete. Recognition of these facts has led us to try to operate more radically, that is to say, to take away as much as possible of the tissues in the immediate neighbourhood of the uterus, *i.e.*, the parametrium and paracolpium.

Schuchardt, by cutting deeply into the perineum, by his so-called paravaginal incision, made the parametrium in total vaginal hysterectomy much more accessible, and by this method much of the pelvic tissue can be removed with the uterus. In 40 per cent. of his operated cases he succeeded in getting permanent cures, *i.e.*, five years' freedom from recurrence, and these brilliant results are undoubtedly to be attributed to his method of operation, in spite of its having the disadvantage that it does not deal with the local pelvic lymphatic glands.

The abdominal radical operation is free from this objection; by it, and by it alone, we are able to deal with the local lymphatic glands, and to remove with the uterus as much of the pelvic connective tissue as may be desirable; and it thereby fulfils a surgical postulate accepted in every operation for cancer, *i.e.*, the resection of the lymphatic glands of the part and of as much as possible of the tissue about the disease.

No operator, therefore, would hesitate to perform the abdominal radical operation if the immediate results to be expected were as good as those of vaginal total extirpation, namely, a mortality of only 3 to 6 per cent. The abdominal radical operation has a much higher mortality, reaching 25 per cent.; but this disadvantage, we may with great probability suppose, will be compensated by a higher proportion of cases cured; though for convincing proof on this point we must wait until, in a few years, sufficient material has been accumulated for the calculation of the permanent results. In the meantime it is incumbent on all who perform the abdominal radical operation to try to lessen the dangers of the method by improvements in technique and by exact estimation of the indications.

The results already obtained by the operation will be related later on. As regards the way in which it is now performed, the technique has been slowly developing for many years. As early as the year 1881 W. A. Freund, the father of abdominal total extirpation

of the uterus, in his operations for cancer occasionally removed lymphatic glands. Veit soon followed his example; and by the middle of the nineties, Kelly, Clark, Rumpf and Kuestner had all performed abdominal operations for uterine carcinoma. Kelly, Clark and Rumpf attached some importance to the prophylactic free dissection of the ureters.

A material advance in the technique of abdominal operations for cancer was made by Ries in the year 1895. He also recommended preparatory exposure of the ureters in order to avoid injuring them in the extended extirpation of the pelvic connective tissue, but he insisted upon the necessity of removing all the pelvic glands, even those which were not enlarged. Our knowledge of the lymph channels and glands in relation with the uterus, so important in the technique of abdominal operations for malignant disease, was materially improved in 1898 by a work from the Breslau Frauenklinik, by Peiser, who showed that, of the women who died from uterine cancer, the disease had affected the lymphatic glands of the pelvis in 50 per cent. He was also able to affirm that the true terminations of the lymphatics of the neck of the womb were the hypogastric and lateral sacral glands.

Towards the end of the nineties the radical abdominal operation had gradually gained more ground, and in 1899, at the Thirteenth French Surgical Congress, Ricard came forward as an ardent supporter of total abdominal extirpation for carcinoma. He declared that vaginal total extirpation was inadequate, on the other hand, that in his opinion of all methods of dealing with circumscribed carcinoma, the abdominal operation fulfilled the maximum of the indications, was the least dangerous, and offered the greatest prospect of radical cure.

In Germany it has been more especially the gynæcological work and writings of Wertheim that have gained recognition and acceptance for the abdominal radical operation; but von Rosthorn, Doederlein, Kuestner,

Kleinhaus, and others have also practised it. The clinical results obtained have been as follows. Wertheim has done 70 radical abdominal operations, which he has reported in three series (*vide ante*, vol. xvii., pp. 84, 190; vol. xviii., p. 12). There were 12 deaths in the first 30, 5 in the second, and only 3 in the third. The first series represented 29·2 per cent., the second 40 per cent., and the third 52·7 per cent., of all cases that came before him. Series of sections (40,000 in all) were made of the parametria and glands of 80 of these women, and carcinoma was found in the parametrium in 45; in 26 on one side and in 19 on both. In 38 cases the parts of the parametrium affected lay, for the most part, away from the uterus, and in 11 no connection with the primary growth could be made out. Cancerous glands were found in 27 cases; 4 times bilateral, 23 unilateral. In 22 the glands were free though the parametria were affected, and on the other hand, in four instances the parametria were free though the glands were diseased. Of the recurrences, up to the present only one has affected the scar of the operation, and carcinomatous glands were removed from four patients who are still, from one to four years after the operation, free from recurrence.

Doederlein has done 26 radical abdominal operations representing a proportion of 70 per cent. of cases seen. He had 4 deaths, 2 after their discharge. He advised that the ureter should be exposed as little as possible lest it undergo necrosis. He removed the glands in 18 cases, and found them carcinomatous in 7.

von Rosthorn has done 33 operations, with 2 deaths only. The disease involved the parametric connective tissue in 72·2 per cent., the hypogastric and iliac glands in 57·5 per cent., and the lower lumbar glands also in 9 per cent. In three-fourths of the cases vaginal total extirpation would have been inadequate.

Zweifel in 21 abdominal operations for cancer has had 4 deaths. Glands were removed from 14 patients, and were found to be cancerous in 6.

Menge lost 3 out of 7 cases operated on by the abdomen; Kroenig 1 out of 8.

Kleinhans has done 32 radical abdominal operations, with 3 deaths. In 19 cases there were enlarged glands, which in 9 were carcinomatous.

The internal inguinal glands also may be affected, so that in every case they should be examined, and if enlarged, removed.

Kuestner has operated for carcinoma upon 56 women by the abdomen, and unfortunately had 17 deaths.

All the operators I have mentioned employed methods which in the most essential points agree with the one devised for his own use by Wertheim.

In the Frauenklinik at Halle also, cervical cancer is dealt with by the radical abdominal method, and in the last two years 34 such operations have been performed, 21 by Professor Bumm and 13 by myself.

The technique employed has been as follows: After thorough disinfection of the abdomen, vulva and thighs of the patient, the cancer is exposed in a large vaginal speculum, and the portio vaginalis is seized with Collins' hooked forceps and drawn outwards. The cancer is then scraped with a sharp spoon until no more tissue will come away, and a tolerably smooth-walled funnel is thus left, which is so thoroughly cauterised with a Paquelln that not a drop of blood or specific juice is visible on the surface of the growth. After this the cancer and the blades of the forceps are thoroughly disinfected with alcohol and a one per mille sublimate solution.

Extremely careful preliminary treatment of the cancer of this kind is required to prevent infection of the field of operation by the bacteria, large numbers of which are to be found in the superficial layers of the growth. The vagina is afterwards, on antiseptic grounds, plugged with a strip of gauze soaked in the sublimate solution.

The pelvis of the woman is now raised till she is in the Trendelenburg position, and the abdomen is opened in

the median line and any intestines which may come into view are pushed back out of the way and carefully covered with cloths. The fundus of the uterus is seized with volsella, and drawn upwards and to the right, so as to put the left ligamentum infundibulo-pelvicum with the spermatic vessels on stretch. Double ligatures are put round the ligament, and between them it is divided so that on that side the two folds of the ligament gape apart. The finger, inserted in this gaping fissure, presses the folds of the ligament still further apart, and is thrust down to seek the ureter, which lies on the posterior fold of the ligament, and, if sought there, may always be found. When brought into view it is, for the time, left undisturbed. The round ligament is now ligatured and divided, and the peritoneum of the broad ligament separated as far as the attachment of the bladder to the anterior cervical wall. The whole of the connective tissue of that side of the pelvis is now open to inspection. Deep down one can trace the course of the uterine artery the whole way from its origin at the hypogastric artery to the uterus. It is ligatured at its origin and divided.

The ureter can then be laid free right up to its entry into the bladder without any bleeding, and when entirely detached from the cervix may be displaced, like a free cord, to one side towards the wall of the pelvis.

Exactly the same steps are taken on the other side, and when both ureters have been exposed, the peritoneum of the anterior cervical wall is divided transversely above the bladder, and the bladder separated by blunt dissection from the cervix and upper part of the vagina. The peritoneum of the posterior cervical wall is then also divided transversely above the pouch of Douglas, and the folds of Douglas are ligatured, and the peritoneum with the rectum is detached from the posterior cervical wall and upper part of the vagina.

The uterus and upper part of the vagina are now quite free before and behind, and their only attachments are

at the sides, below the spot where the ureters lie next to the cervix, by some of the connective tissue which surrounds the uterus and vagina.

These attachments are secured as near the pelvic wall as possible, in Kocher's clamps, and are then divided. When this has been done on both sides, the uterus and upper part of the vagina are free all round and can be amputated. The vagina is opened in front and the incision carried right round it. It lies entirely in the discretion of the operator how much of the vagina is to be removed. The greater part, or even the whole of it, can be taken away without any difficulty. In a case of sarcoma I removed three-fourths of the vaginal canal along with the uterus quite easily.

The absolute arrest of all hæmorrhage is of extreme importance, and after the removal of the uterus every point that is still bleeding is secured.

The next step is to palpate the sides of the pelvis, especially along the course of the great vessels, and to remove all glands that can be felt, with the connective tissue attached to them.

Finally, the wounded surfaces left by the operation are carefully shut off from the peritoneal cavity, inasmuch as the anterior fold of the broad ligament is united to the posterior, and the vesical peritoneum with that of the pouch of Douglas, by a continuous catgut suture beginning at the left side. Above the catgut the serosa may be stitched with a silk Lembert suture for extra security. The abdominal wound is closed by continuous suture of the peritoneum and muscle with catgut, by interrupted silk suture of the fascia, and by one unbroken aluminium-bronze wire suture of the skin.

The last step is to insert by the vagina a short tampon in the pelvic wound. More complete tamponade has been given up, for the plug interferes with the healing of the wound by first intention, and may even lead to chronic suppuration, thrombosis, and pyæmia. The vagina is loosely plugged with vioform gauze.

During the operation care must be taken that the ureters are not detached more than is absolutely necessary from the tissues about them. If stripped bare to too great an extent, they are insufficiently nourished, and this may lead to necrosis of the ureter, and ureteral fistula during convalescence. We had two such cases at Halle, and Wertheim also has had similar experiences.

The amount of tissue from about the uterus, and the amount of the vagina that may be removed by the operation just described, is shown in two drawings taken from a case operated on by me.

The first drawing (fig. 1) shows how large a portion of the parametrium and paracolpium, with very nearly the whole of the uterine artery, has been removed with the uterus. The second drawing (fig. 2) shows the carcinoma with the portio vaginalis and a large cuff of vagina.

The third drawing is taken from another case; in it may be seen how the carcinoma has broken through the cervical wall and found its way into the folds of Douglas and into the parametrium. It affords an example of the necessity of dividing the tissues at a considerable distance from the uterus. In this case the operator's incision was made in diseased tissue, and it is certain that carcinoma was left behind and will soon betray itself by recurrence.

Of the 34 cancerous patients operated on by the above method, 7 died from the operation, a mortality of 20 per cent. Death was due in 6 cases to infection, in 1 to shock a few hours after the operation. All the deaths, except one, happened in advanced carcinoma which had extended far beyond the uterus and infiltrated the parametrium, and the single instance in which the parametrium was not affected was a carcinoma that was removed on the seventh day of childbed. It is well known that puerperal cases of carcinoma are extremely liable to infection.

In 7 cases no glands were detected, but glands were removed from the other 27; those of 24 patients were submitted to microscopical examination, and in 11 cases

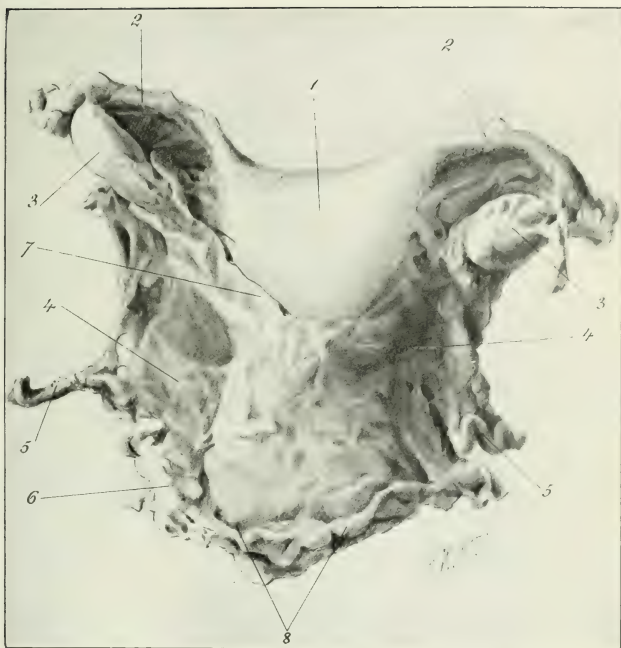


FIG. 1.

A uterus removed by the radical abdominal operation for cancer (from behind).
 1, Fundus uteri; 2, 2, tubes; 3, 3, ovaries; 4, 4, parametria; 5, 5, arteriæ uterinæ;
 6, paracolpium sinistrum; 7, left fold of Douglas; 8, posterior vaginal wall.

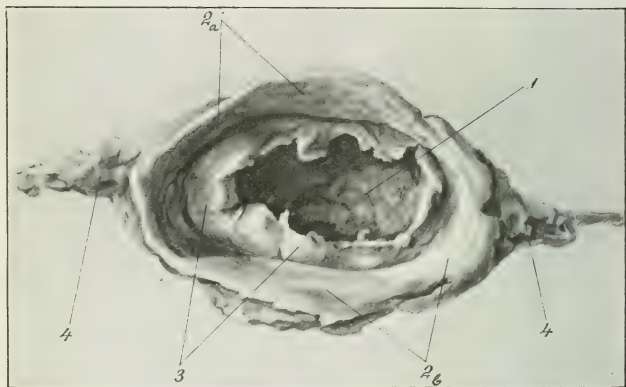


FIG. 2.

View of the carcinoma from the same uterus as fig. 1 (seen from below).
 1, Carcinomatous cavity; 2a, anterior; 2b, posterior vaginal wall; 3, portio vaginalis,
 4, 4, paracolpium.



FIG. 3.

Microscopical section through the cervix uteri, parametrium and folds of Douglas (left side). 1, Primary growths affecting the whole thickness of the cervical wall; 2, 2, carcinomatous tissue that by continuity has penetrated the tissue of the folds of Douglas and the parametrium; 3, the uninvolved tissue of Douglas's folds; 4, left parametrium; 5, tissue between cervix and bladder.

(32.4 per cent.) proved to be carcinomatous. In only 10 instances was the parametrium quite free from disease, in all the others either one or both sides were more or less infiltrated.

Adding the Halle cases to those of the other operators above mentioned, we have 273 radical abdominal operations with 54 deaths, an average mortality of 23.3 per cent. In 68 out of 184 cases, that is to say, in 36.9 per cent., the disease was found in the glands. No further analysis is needed to show that these 68 cases could not have been cured by vaginal total extirpation.

Against the removal of the glands it is objected that such removal can in no case be complete, and therefore is, in principle, purposeless, as it would be impossible to detect all the glands of the pelvis, including those which were not enlarged. To this it may be replied that Wertheim has found that carcinoma is never present in glands so small as to be impalpable, and therefore that for a radical operation it suffices merely to remove those glands which are sensibly enlarged.

Furthermore it has been pointed out by Wertheim, von Rosthorn, and others, that the glands may be healthy though the parametrium is infiltrated with cancer, and conversely, that there may be carcinomatous glands where the parametrium is not involved. Consequently it appears that we can never draw any conclusion as to carcinomatous glands merely from palpation of the parametrium.

Besides, we have not otherwise a single clinical or anatomical symptom in uterine carcinoma to enable us to say in which forms of the disease the glands are involved. Indeed, we can never know beforehand the cases in which vaginal total extirpation might be an adequate proceeding. I think for these reasons there is all the more necessity for the conclusion that every operable case of cancer of the neck of the womb that one wishes to treat in at all a radical way should be dealt with by the abdomen.

Another important question is, which cases are to be

held suitable for the radical abdominal operation? It has been held in various quarters that this method allows us to extend the indications for the operative treatment of malignant disease, and therefore to deal with cases that cannot be operated upon in any other way. I think this to be a false standpoint, that will in course of time be abandoned.

The principal danger of the operation, and the only serious objection that can be brought against it, is the high rate of its mortality. Hitherto from about 20 to 25 per cent. of all who undergo it die, and generally from infection. The infection depends, as far as these cases of ours have shown me, on the carcinoma itself more than upon any other circumstance. But the peritoneum is less inclined to infection than the extensive wounds in the pelvic connective tissue that are made in this operation, and, in my opinion, these connective tissue wounds are what makes the operation so dangerous. I therefore hold all methods in the radical abdominal operation, such as the transperitoneal methods of Mackenrodt and Amann, which do not regard this danger, but rather seek to avoid the infection of the peritoneum, to be wrong in principle. They have still the serious disadvantage that they leave extremely extensive wounds in the connective tissue.

I have already said that carcinoma is prone to lead to infection. That is especially the case when the disease is far advanced, inasmuch as then the surface is ichorous or purulent. When such growths are torn in the course of an operation, and any of their contents finds its way into the wounds in the connective tissue, or even into the peritoneal cavity, the danger of fatal sepsis is extreme. The far-advanced and decaying cases are therefore very unfavourable for operation, while limited cancer which has not affected the parametrium can be removed by the abdomen without great danger. This is shown by our cases, for of those with free or but slightly infiltrated parametria only one died from the operation.

I am therefore convinced that in circumscribed cancer, though the radical abdominal operation may have a higher mortality than vaginal total extirpation, it has the important advantage of being a far more logical proceeding, and that by it we shall permanently cure more women afflicted with cancer than by any other method.

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REPORTS.

FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE,
MADRID, APRIL, 1903.

THE Section of Obstetrics and Gynæcology was one of the most active, though several of the Reporters did not attend, and all the communications on the Agenda were not actually made.

The Organising Committee was confirmed in its office under the presidency, for Obstetrics, of Francisco de Cortejarena, and for Gynæcology, of Eugenio Gutierrez, and with Carmelo Curillo y Cubero as Secretary of both branches.

At the first session, Professors Calderini and Bossi, who were both present at the Congress, were nominated Honorary Presidents, and the Chair was subsequently occupied by Doléris, Treub, Granville Bantock, Murdoch Cameron, and others.

The forenoon sessions were devoted to Obstetrics, those in the afternoon to Gynæcology. Abstracts of the reports at the first session upon "The Indications for Hysterectomy in Acute Puerperal Infection," by Pinard, of Paris, and L. Cortignera, of Santander (who was not present), will be found in the Summary.

The second subject for discussion was "The Treatment of Placenta Prævia," upon which the conclusions of Candela, of Valencia, only were read; the other reporters did not attend, and their communications were not presented.

Doléris, of Paris, read a paper "On the Pathogenesis and Treatment of Chronic Inflammation of the Pelvic Peritoneum and Cellular Tissue"; Jayle, of Paris, and Josephson, of Stockholm, reported upon "The Indications

for Opotherapy and its Results"; and Fargas, of Barcelona. Treub, of Amsterdam, and Granville Bantock, the Representative of the British Gynæcological Society, upon "The Conservative Surgery of Lesions of the Adnexa" (*v. ante*, p. 129).

Two subjects were proposed for special discussion, the first of which, "The Early Diagnosis of Ectopic Gestation," was introduced by Calderini, of Bologna; the second was "The Treatment of Uretero-Vaginal Fistula."

Of the remaining contributions, one of the most important was that of Ivanoff, of Moscow, upon the cases of "Rupture of the Uterus" observed during a period of twenty-five years at the Maternity Hospital in that city.

REPORT UPON THE CONGRESS OF THE SANITARY INSTITUTE, 1903.

By JAMES METCALFE, M.D.

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Delegate representing the British Gynæcological Society at the Congress.

THE Twenty-first Congress of the Sanitary Institute held in Bradford, July 7 to July 10, was undoubtedly an unqualified success. The weather was delightfully fine and warm, and the number of delegates and representatives was probably greater than ever before. Bradford, the great centre of the worsted industry, is a very progressive city. Great interest is taken in sanitary matters and in questions affecting public health: so the Congress was enthusiastically welcomed. The Mayor received the delegates at the Town Hall, and afterwards entertained them at a *Conversazione* in St. George's Hall. The introductory address of the President (Lord Stamford) was an admirable résumé of all matters connected with the health of the people. The Health Exhibition was probably one of the finest that had ever been got together. The garden parties and receptions by prominent citizens

gave constant opportunities for discussing under delightful conditions most of the problems of the day.

In looking through the programme of the Congress, the paramount idea in the mind of the representative of the British Gynæcological Society was in which departments he should look for items of especial interest to its Fellows. In the subjects suggested for discussion or papers two or three appeared to be of this nature; such, for instance, as the "Etiology of Cancer," "Health Aspects of Occupations for Women," "Factories and Workshops, and the Teaching of Hygiene in Elementary Schools." Unfortunately the most important of these subjects were not discussed at all, as no paper was read on the Etiology of Cancer, and one on "Provision for the Health of Women and Children in Factories," through some unfortunate misunderstanding, was omitted, and the only points of any special interest to the Fellows of the British Gynæcological Society were raised in the Presidential addresses in two of the meetings.

Professor Thomas Oliver, of Newcastle-on-Tyne, in the Section of Industrial Hygiene, made some remarks on the employment of married women in factories, and gave reasons for an extension of the time of compulsory non-attendance at work after child-birth, and suggested that the hardships incidental to the loss of the woman's earnings could be met by the establishment of benefit societies for this particular object, either on purely voluntary lines, or State-aided, as in France. In a large industrial centre like Bradford, where women's labour is so greatly utilised, this question is a very important one. Owing to the keen competition of foreign countries in the markets of the world, the prices obtainable for Bradford textile goods are much less than formerly. This has led to a reduction in the wages of the men, and greater difficulty in making adequate provision for the domestic necessities of every workman's household. The husband, too, is frequently out of work for long periods, and the

wife has to endeavour to supply the necessities of the home. She is consequently often compelled to resume her work at the mill at a period when she ought to be free to attend to the wants of her new-born child. This entails consequences of most serious import to the city of Bradford. There is an enormous infantile mortality and a greatly diminished birth-rate. The death-rate for children under one year of age is no less than 168 per 1,000 births; and the birth-rate of 23 per 1,000 is one of the lowest, if not the lowest, of the great towns of England. The Bradford Corporation drew the attention of the members of the Sanitary Congress to a new departure which had been recently instituted. This is a municipal depôt for the supply of humanised milk, and sterilised milk, for young infants. The milk is sold in bottles containing the proper quantity for a meal for children at different ages, and as it is retailed without profit, every encouragement is given to mothers to see that the infant is properly fed. It is hoped that by teaching the mothers the necessity for cleanliness and carefully prepared milk for the infant, that the frightful mortality may be considerably reduced.

With regard to the diminished birth-rate, one cannot assume that this is limited to the mill-workers. But amongst this class there is an increased incentive to take precautions for the prevention of conception from reasons connected with their economic environment. Where the man is hardly able to earn sufficient wages to keep the family in decent comfort, it is a matter of serious moment for the women to become pregnant; she has to leave off work some time before parturition, and she cannot return to the factory, according to statute, until at least a month after child-birth. In addition to this dead loss of wages, there is the actual increase of expense connected with her condition; she may have to pay a doctor's and nurse's fee, and household expenses are also increased. Being compelled to return to work as soon as she is legally entitled to do so, she very often suffers

from some of the symptoms of uterine displacement with which gynæcologists are so familiar. Of course symptoms of displacement depend a great deal on the amount of involution which has taken place. No doubt in some cases this is completed in a month's time. But more frequently in women of the factory class, who are often debilitated from long hours of labour, constant standing and insufficient food, it is delayed to six weeks, two or even three months. Subinvolution and displacement of the uterus is followed by chronic endometritis, which in itself is a reason for the diminished birth-rate. We are therefore faced with some serious considerations. Are we, as Professor Oliver suggests, to lengthen the time before a woman is legally allowed to return to work after her confinement, and perhaps impoverish the family? or are we to allow her to injure her health and possibly imperil her fertility or the physique of her future children if she has any? State-aided benefit societies may at some time be possible in this country, but I do not think they are at present within the range of our political purview; it should not, however, be impossible to devise a voluntary system to make adequate provision for the wants of a woman during the post-partum period.

Professor Clifford Allbutt, in his Inaugural Address in the Section of Sanitary Science and Preventive Medicine "On the Survival of the Fittest," made some interesting observations. He seemed to assume that because it was falling, a low birth-rate might be better in the end than a higher rate of children, some of whom would be of lower vital capacity and many less carefully reared. A great flaw in this argument is that though the birth-rate is undoubtedly falling, it is not at all certain that the vital capacity of the children is any greater, if so great, as formerly. An underfed, overworked mother does not bear even a small number of well-developed children. Sir William Anson recently stated in the House of Commons that there were 60,000 children in London who were

physically so inferior that they could not derive proper benefit from school teaching: and a lowering birth-rate would seem to be associated with a deterioration of the race, and this view is supported by the fact that every third man recruited for the Army is rejected as physically unfit. We are driven to assume that the proper method to improve the physical stamina of the people is to help the mothers to live a regular healthy life during pregnancy, and if possible to prevent them working in factories for a considerable period (probably two months) both before and after confinement. This question is of such extreme interest to our society that it might well form the subject of a discussion at one of its meetings.

REVIEWS.

ATMOCAUSIS AND ZESTOCAUSIS. The Use of High-Pressure Steam in Gynæcology. Also an Appendix on Atmocausis and Zestocausis in Surgery and Rhinology. By Dr. LUDWIG PINCUS. Pp. xii. and 410, large 8vo, with 35 Plates. WIESBADEN: J. F. Bergmann. GLASGOW: F. Bauermeister. 1903.

THIS work contains a full history of the origin and the development of the method of treating uterine hæmorrhage (and some allied affections), by the application of superheated steam to the interior of the uterus. Its author, Dr. Pincus, of Danzig, had been for many years impressed with the inadequacy of the ordinary means at our disposal for the treatment of this affection. So when, in 1886, Professor Snegirew published the first account of the successful application of superheated steam to the interior of the uterus in such cases, he at once recognised the immense importance of the new method, and ventured in October of the same year to put it to the test in his own practice. Unfortunately Professor Snegirew had not given any details of the operation or of the instrument employed, and so Pincus had to make use of an improvised apparatus of his own. Moreover, not being officially connected with any clinique, he had to depend entirely on cases that occurred in his private practice for the development of the method. During the trying period that this entailed he enjoyed, however, the constant support, encouragement and advice of such men as Professor v. Winckel, of Munich, Professor Winter, of Koenigsberg, and Professor Fritsch, of Bonn. To the latter he is further indebted for his

willingness to put the pages of the *Zentralblatt für Gynäkologie*, of which he is editor, at all times at his disposal, whether to bring the whole subject prominently before the profession, or to make public as soon as possible the successive improvements in the instrument and the method, or to clear up misunderstandings and elucidate questions, about which at first there was naturally a good deal of difference of opinion.

The decisive point in the history of the method was the collective investigation undertaken in the year 1899, at the instigation and under the auspices of Professors v. Winckel and Fritsch, the results of which were embodied in a paper read by Pincus at the seventy-first meeting of the Association of German Naturalists and Physicians, held at Munich in September, 1899.

The number of cases from nearly every quarter of the globe that were reported to Pincus in response to his letter was 833, and of these 749 were returned as either cured or greatly improved—a wonderful result to be obtained by a new method in so short a time. Indeed, very little change has taken place since, either in the technique of the operation or in the instrument.

The immediate result of this report was that the method was recognised over a large portion of the Continent, and in America, as a most wonderful addition to the means at our disposal for the treatment of uterine hæmorrhage, and was soon taught to students in the clinics and described and recommended in the text-books. Professor Fritsch, in the tenth edition of his work on the “Diseases of Women,” refers to it as being “safe, painless, and effective.” Such a statement should at least lead us to conclude that the method has already passed through the probationary stage, and that it must be worth our while to study its indications and to make ourselves familiar with its technique.

It seems strange that up to the present this method seems to have failed to stimulate the curiosity or arouse

the attention, not to say enthusiasm, of the profession in this country. It is true that Professor A. V. Macan read a paper on "Atmocausis and Zestocausis, and demonstrated Pincus's instrument before the Obstetric Section of the Academy of Medicine of Ireland in April, 1900; and Professor Simpson read a paper on the same subject to the Obstetrical Society of Edinburgh in May of the same year. But the former paper has never been published, and though out of fourteen cases Professor Simpson was able to report eleven cured, and three improved, we are not aware of his example having so far been followed in Scotland. This may in part be due to the fact that he made use of the original instrument of Snegirew, which was very imperfect, not to say dangerous. He also always put the patient under an anæsthetic, and so never had the opportunity of demonstrating one of the greatest advantages of the operation, viz., its painlessness.

A reference to the method was also made by Dr. John Campbell, of Belfast, who introduced the discussion on Metritis at the meeting of the British Medical Association at Cheltenham in 1901 (*British Medical Journal*, October 5, 1901), and condemned it as "an unnecessarily severe and dangerous proceeding." As the alternative must in some cases, at least, be the total extirpation of the uterus, this seems to be a rather illogical conclusion. Nor could anyone who had seen the operation performed as it should be, or who had read the reports sent in to Pincus for the collective investigation, hold such a view, unless already prejudiced against it.

More recently a paper "On Vapourisation of the Uterus" has been published by Dr. G. F. Blacker, in the *Journal of Obstetrics and Gynæcology of the British Empire* for May, 1902, which, however, by no means represents either the views held, or the instrument employed at the present time, by Pincus and his school, or even the results of the collective investigation report of 1899. For the author used a modification of the original model of Snegirew,

which, as already stated, is very imperfect, though at the same time he gives a picture of Pincus's instrument as it has been furnished by Messrs. Hahn and Loechel, of Danzig, ever since 1899.

In his description of the operation he says that the time should be counted from the moment at which the steam is first seen to escape either from the return tube or from the uterus. Now if the operation is properly performed with Pincus's instrument, steam should never be seen escaping from the uterus, for the fibre covering of the catheter is specially shaped to prevent such a thing happening.

Further on he says (p. 492): "If a form of apparatus be employed in which the steam and condensed water are allowed to flow back into the vagina, steps must be taken to prevent scalding of the patient. This is best avoided by the administration of a cold vaginal douche during the time that the steam is allowed to pass into the uterus. It can easily be arranged so that while the posterior vaginal wall and perineum are bathed by the cold lotion no risk is run of cooling either the uterine canula or the steam tube, and so causing condensation of the steam." One naturally asks, What is, then, to prevent the escaping steam from scalding the *anterior* vaginal wall? For serious scalding of the parts about the orifice of the urethra have frequently been noted from this cause.

He also always cures the uterus before applying the atmocautery, thus depriving himself of the power of judging what action the atmocautery would have had by itself; and always administers an anæsthetic, thus preventing himself from ever learning the extraordinary painlessness of the operation, or from being warned by the expression of pain on the part of the patient that something is going wrong.

We were not therefore greatly surprised to find at the end of his paper that he is not a very enthusiastic admirer of the method; thus he says (p. 510): "This mode of

treatment is undoubtedly of value in certain cases ; but while it may supplement the use of the curette, it can never replace the latter instrument."

Now, after a considerable experience of both methods, we think it would be more near the truth to put this in exactly the opposite way, and entertain little doubt that, when the merits and advantages of the method are fully appreciated, atmocautis will be the rule, and the curette will be used chiefly to enable us to exclude malignant disease, or in exceptional cases, like endometritis fungosa, or in which we purpose on a later occasion to obliterate the cavity of the uterus with the atmocautery.

The original apparatus of Snegirew was open to the following objections :—

There was no way of regulating the pressure of the steam in the boiler.

The catheter itself got hot and cauterised any part with which it came in contact.

The steam was free to return through the cervix, alongside the catheter, and scald the cervical mucous membrane, leading to subsequent stenosis or atresia.

It also quite hid the field of operation in the vagina, and when escaping outwards frequently caused painful scalding in the vagina and round the orifice of the urethra.

The question of dosage was most difficult ; the length of the application being the only factor that could be determined accurately.

We do not think that it is necessary to follow Pincus through the various steps by which the instrument of Snegirew has gradually been improved. For many of these he freely acknowledges his indebtedness to others, and he is of opinion that the quick spread of the method is greatly due to the fact that the manufacture of the instrument has from the first been in the hands of one firm, Messrs. Hahn and Loechel, of Danzig, who thoroughly test every instrument before it is sent out. But as the operation is still unknown to the great bulk of the profession in these

countries, we will describe it in sufficient detail to enable anyone who becomes possessed of an instrument to feel that they know how to use it without danger to their patient or to themselves.

The improved apparatus consists of a boiler of 6-litre capacity, and capable of resisting a pressure of over $2\frac{1}{2}$ atmospheres, in which the steam is generated, and in the top of which a thermometer and a safety valve are fitted. From the upper part of the boiler a curved tube projects, to which is joined an india-rubber tube 1 metre in length. To the end of this is attached the intrauterine catheter itself, made very much on the plan of the ordinary Bozemann's catheter, but having a non-conducting cover fitted over that portion which lies in the cervix, and a tube fitted to the return opening to carry off the waste steam. To the instrument is attached a wooden handle, and just above this there is a two-way cock to regulate the supply of steam to the uterus, the upper part of the tap being of wood, so that the operator may not burn his fingers when using it. If we intend using temperature from 100° to 105° we fill the boiler one-third full, and if from 105° to 115° one-half full. The india-rubber tube is specially constructed to resist the pressure of the superheated steam, and is further strengthened by a covering of close webbing. It should not exceed a metre in length for private practice, though in a clinique it is often well for purposes of demonstration to have it as long as two metres. The non-conducting material used to cover the cervical portion of the catheter is made of a fibre which, manufactured in America by some patent process of subjecting wood shavings to hydraulic pressure, is now extensively used to insulate the various parts of electrical machines. It can be cut and turned like wood, and withstands the action of boiling water (no soda) and of acids very well, and so can be thoroughly disinfected. For cases in which contact burning would be specially dangerous, such as interstitial myomata, the

intrauterine portion of the catheter is made entirely of fibre ; in others, on the contrary, where contact burning is intended, the uterine piece of the catheter is made entirely of metal, and is not provided with holes, so that it acts like the ordinary thermo-cautery, but in a milder way. There is also another form of metal top provided, which is larger and flatter and is used for stopping hæmorrhage in operations on parenchymatous organs.

Besides these essential instruments there are some which are of great use if the operator is without skilled assistance, viz., a set of short wooden specula, to prevent the vagina being scalded should the steam escape by accident from the cervix during the operation, and a pair of ordinary bullet forceps, with removable handles. These latter enable us first to fix the cervix with the forceps, and after having removed the handles, to pass the speculum over the blades and then to replace the handles. We can in this way, even when it is considerably displaced, draw the cervix into the speculum.

Preparations for the Operation.—The patient is placed on her back in the position for the operation for stone, the cervix is seized near the commissure with a pair of the special atmocausis forceps, one of the short wooden specula is passed over the forceps, and the handles of the latter, which had been removed to pass the speculum, are replaced. In all cases of preclimacteric hæmorrhage, or where there is the least suspicion of malignant disease, this must first be excluded either by palpation of the interior of the uterus, or by microscopic examination of the mucous membrane, or by both. When using the curette for this purpose special attention should be paid to the fundus and cornua, and, when possible, the atmocausis should not follow immediately on the curetting. The dilatation of the cervix, so as to allow the catheter with its protective covering of fibre to be readily introduced, is the first step in the operation, and if the cervix is rigid, and the symptoms not pressing, is best effected by

laminaria tents, more especially if we intend to explore the cavity with the finger, a step which may in the end save time, as it may render curetting unnecessary. Before any attempt is made to introduce the catheter all mucus, or blood clots, or placental remains must be carefully removed from the interior of the uterus. This is probably best effected by washing out the uterus with a 1 per cent. solution of peroxide of hydrogen. The length of the uterus and of the cervix should be carefully ascertained before the dilatation takes place, and the condition of the walls of the uterus, and the absence of any complication in the adnexa and parametria determined. In the large majority of cases narcosis is unnecessary. If there is any doubt as to the condition of the adnexa the patient must be carefully watched during previous menstruation to find out if there is any evening rise of temperature or swelling of the tubes. If there is any exacerbation during menstruation, or after the systematic application of intrapelvic pressure (*Belastungstherapie*) the case is unsuited for atmocausis or zestocausis.

The Operation.—The boiler is filled with about 7 oz. of water for temperatures of 100° to 105° , and 11 oz. of water for temperatures of 105° to 115° . If there is hæmorrhage it is well to use a 3 per cent. solution of formaline instead of plain water. For ordinary cases the revolver burner is the best, but for the lower temperatures, or if there is any delay in the operation, the double burner is used, of which only one side need be lighted. If the two-way cock is placed obliquely no steam can escape from the boiler, and consequently the temperature rises quickly, and the rate at which this takes place can be regulated by the amount of steam that is allowed to escape and the sort of burner that is used. The apparatus itself should not be carried about, but should be placed on a table or on a specially constructed stand. As soon as everything is ready the two-way cock is placed transversely and any condensed water that has collected in the india-

rubber tube is expelled. The point of the catheter is now depressed, and the cock turned through a quarter of a circle, the steam then escapes through the catheter, warming the whole apparatus, and clearing out any still remaining water. The cock is now turned back till it is nearly transverse, and the handle of the instrument being a little depressed, the catheter is quickly introduced into the uterus. As soon as it is well in the cock is slowly turned so as to point along the tube of the catheter, and the steam is thus gradually admitted into the uterus. We do not, however, begin to count the seconds till the steam begins to escape from the waste steam tube. The catheter should not be allowed to remain in one position in the uterus, but should be moved a little from side to side, so as to avoid the risk of contact necrosis. The fibre cervix protector must never be drawn out so far as to leave the inner os unprotected. The operation should be shortened in proportion to the readiness the uterus shows to contract, the amount of contraction of the uterus being determined by the hand placed on the fundus. Before removing the catheter from the uterus the steam must be shut off by turning the stop-cock either obliquely or transversely. The catheter should at once be removed should the return tube become stopped, except in cases of bad hæmorrhage, for then the stoppage of the tube causes the tension and heat of the steam to rise, and thus increases its hæmostatic action. In other cases the tube should be cleared out thoroughly, the uterus washed out with a 1 per cent. solution of peroxide of hydrogen, and the catheter again introduced. In estimating the time during which the steam should be allowed to work, we must take into consideration the size of the uterine cavity, the thickness of its walls, and, above all, the contractility of its muscular fibre, the rule being to use the highest possible temperature for the shortest possible time. If necessary the operation may be done in the out-department, but is, of course, safer if done in hospital, and the patient

should stay in bed at least three to four days. A careful watch should be kept at the time the sloughs are coming away to prevent them stopping the cervix, and so causing absorption. As a rule intrauterine treatment should be avoided during convalescence.

The rules for the use of the zestocausis are very similar to those just given for the atmocausis, but the temperature of 115° is always necessary, and should the patient complain of much pain the operation should be suspended, and a careful search made to ascertain the cause.

Several important and interesting questions may now be considered :—

- (1) Is narcosis necessary ?
- (2) Is ambulant treatment safe ?
- (3) Is assistance necessary ?
- (4) Is the operation one that should be undertaken by the general practitioner ?
- (5) What are the relative positions of atmocausis and zestocausis to the operation of curetting ?
- (6) What are the active factors in the success of the treatment by superheated steam ?

The answer given by our author to the first question, Is narcosis necessary ? is a decided negative, indeed, he goes so far as to say that most of the accidents that have happened during the operation have been traceable to its use. Indeed, he thinks that the first case he operated on owed her life in all probability to the fact that she was not under an anæsthetic. For shortly after the operation was commenced she complained of a violent pain, like uterine colic, and the operation was therefore abandoned. From his subsequent experience, Pincus thinks it probable that the pain was due to the point of the hot metal catheter piercing the mucous membrane and entering the muscular coat of the uterus, and if the patient had not complained of pain the wall of the uterus would, very probably, have been perforated, with fatal results to the patient.

He does not, however, deny that now and then, under exceptional circumstances, an anæsthetic may be necessary, such as where the neck of the nulliparous uterus has to be dilated, or where the patient is unruly or hysterical; but he holds that it is certainly wrong to make it a rule to give it.

The second question is almost as important, viz., May the operation be performed in the dispensary? The views on the point are divided, but the conclusion to which Pincus comes is, that while under exceptional circumstances the operation may be performed in the dispensary and the patient sent home afterwards, she should always go to bed for at least three or four days, till the severe local reaction is over. In a few exceptional cases the operation is followed by some rise of temperature, due, without doubt, to the operation itself.

As to whether assistance is necessary, he thinks that while it is undoubtedly a great advantage to have assistance, still we ought to be able to dispense with it entirely in cases of urgency. In order, however, to do this we must make use of the short wooden speculum and the special forceps, already described, and also have the whole apparatus mounted on a special stand. On the latter there is a place to hold the atmocautis instrument, so that it can be laid down without any fear of its coming in contact with anything not thoroughly disinfected. If the speculum shows any tendency to be expelled this can easily be prevented by the patient placing a finger against the upper edge, but this is only found necessary when the speculum is quite new or the perineum is badly ruptured.

He describes the way in which he operates without any assistance thus. The stand is placed within easy reach of the right hand of the operator, and the thermometer turned so that the index can be read off. He first takes the atmocautery in the right hand and with the left hand opens the two-way cock, which he shuts again as soon as the condensed water has all escaped. The

left hand then grasps the forceps, and the right hand introduces the cautery. The left hand now leaves the forceps and turns on the steam; it is then placed over the fundus to control it, and may pass a couple of times from the fundus to the forceps and back again, as found necessary. Finally, the left hand turns off the steam, again grasps the forceps, and then the right hand removes the atmocautery. After a little practice this will be found much easier to do than to describe.

Pincus does not think, however, that the operation is one that should be undertaken by the general practitioner, as it presupposes an accurate gynæcological diagnosis and a thorough acquaintance with gynæcological methods; but the general practitioner should know of the method and what it is capable of effecting.

We may now pass on to consider the relation in which atmo- and zestocausis stand to the operation of curetting. Are they mere rivals? may they be used indiscriminately, or are they complementary?

That the atmocausis is not a mere rival of curetting, and that they cannot be used indiscriminately, is amply shown by the fact that atmocausis has proved an immediate success in cases after repeated curetting has failed. Until the introduction of the atmocausis the extirpation of the uterus was the only alternative where curetting had failed to arrest a dangerous hæmorrhage. Furthermore, Pincus looks on atmocausis as being undoubtedly a milder measure than curetting, and the technique simpler and more easily learnt.

The conditions brought about by curetting also are more likely to lead to danger than those that follow atmocausis; for after curetting we have a large freshened surface which favours the entrance of pathogenic bacteria, whereas the cauterisation produced by the atmocausis and zestocausis is most unfavourable to their entry. Curetting is also inferior to atmocausis, in that it is not itself a curative agent, but only makes the subsequent cure

possible, whereas the atmocausis produces a condition in the tissues which itself leads to cure.

The complementary importance of curetting, however, is well seen when we use it as a preliminary to atmocausis, with the object of excluding malignant disease, or with the intention of producing obliteration of the uterine cavity.

This leads on at once to the important question, Should atmocausis and curetting be always combined or not? The general answer to this question is, that during the child-bearing period the combination should be the exception, whereas about the period of the climacteric it should be the rule. In any case an interval of from ten to twelve days should be allowed to elapse between the two operations. Pincus holds that the atmocausis itself is more painful, and is more likely to be followed by secondary hæmorrhage, if it follows immediately after curetting.

One point on which he lays great stress is, that if curetting prove a failure we should not go on repeating it indiscriminately, but should at once try atmocausis; and if the atmocausis fail, we should not repeat it till we have dilated the uterus and assured ourselves that there are no small mucous polypi in the cornua.

If the curette has been used a number of times the mucous membrane in the neighbourhood of the inner os is certain to have been destroyed, and the use of the atmocautery is very likely to be followed by stenosis or atresia, leading to dysmenorrhœa or hæmatometra.

If in using the curette we find that the mucous membrane about the orifice of the tubes is thickened, we should apply the zestocautery to this portion of the mucous membrane, and follow it by the atmocausis of the whole uterus. This would give the combination abrasio-atmocausis-zestocausis-atmocausis.

Let us now consider what are the active factors in the success of the treatment by superheated steam? The obvious answer is that the effects are undoubtedly produced by the application of the heat.

(1) The immediate effects are : (a) The stimulating effect of the heat on the muscular fibre of the uterus ; (b) the cauterising effect of the heat on the mucous membrane, and more especially on the muscle ; (c) the resorptive action of the condensed water, which is rapidly taken up by the tissues, this is much the same as (a).

(2) The more remote effects are : (a) The powerful and continuous muscular contraction, leading to involution ; (b) the profuse discharge, which produces a change in the conditions of the nutrition of the parts and carries away infective germs ; (c) the wall of granulations that is formed beneath the slough, which protects the body from septic invasion ; (d) the increased flow of blood to the uterus during the period of reaction ; (e) the resulting succulence in the adnexæ and the parametria.

The indications for atmocausis or zestocausis may be absolute or relative.

I. Atmocausis is absolutely indicated :

(a) In all cases of uterine hæmorrhage which we fail to influence or cure by the usual methods.

To these belong : (1) Certain forms of præclimacteric hæmorrhage ; (2) all cases of hæmophilia ; (3) certain cases of bleeding myomata, and of hæmorrhage from inoperable cancer corporis uteri ; (4) certain forms of endometritis hæmorrhagica (endometritis hyperplastica, Ols-hausen) ; (5) atonic and endometritic hæmorrhage, especially after abortion or late in the puerperium.

(b) To produce sterility in women with incurable diseases.

II. Atmocausis may be relatively indicated : *see* II.

(a) In subinvolution, which does not yield to treatment.

(b) In inflammatory affections where the curette is indicated we may use the atmocautery instead of it, or as complementary to it.

(c) In a special class by themselves we place : (1) Endometritis tuberosa : (2) endometritis gonorrhœica : (3) endometritis saprica : (4) endometritis puerperalis septica incipiens.

III. Zestocausis is absolutely indicated :

(a) When we want to cauterise certain circumscribed portions of the endometrium (cornua).

(b) In certain cases of endometritis dysmenorrhœica.

IV. It is relatively indicated :

(a) When in a small nulliparous uterus the curette is indicated for inflammation, we may use the zestocausis either instead of it, or in combination with it.

(b) In cases of obstinate endocervicitis and obstinate erosion, as being a milder application than the thermo-cautery.

(c) In the treatment of obstinate fistula, and in operations on the liver, spleen, &c.

Contra-indications.—These are the same for atmo-causis and zestocausis as for all other methods of intra-uterine treatment.

The contra-indication is absolute :—

(a) Till malignant disease is excluded.

(b) If malignant disease is present.

(c) If there are any inflammatory or painful complications in the adnexæ or the parametria, especially tumours in the tubes.

(d) When there is any exacerbation of the symptoms during menstruation or after treatment by intra-pelvic pressure (“ Belastungstherapie ”).

(e) If the patient complains of acute pain during the application of the steam the operation must be at once abandoned.

Zestocautery is contra-indicated in all cases where the uterine walls are thin and relaxed.

A very striking example of the success of the atmo-cautery in a case of preclimacteric hæmorrhage was brought forward by Dr. Pincus in the paper that he read at Munich in 1899, on the “ Collective Investigation Report on Atmo-causis and Zestocausis.”

The patient, aged 58, had suffered for years from frequent and abundant hæmorrhages, which defied all treat-

ment. The uterus had been repeatedly curetted, the last time in January, 1899, when the diagnosis, endometritis interstitialis, was made by the help of the microscope. As the hæmorrhage still continued, it was resolved to extirpate the uterus. On account of the great anæmia and weakness of the heart's action, it was decided to transfuse the patient first. After the transfusion the temperature rose to 40° and the pulse could hardly be felt, so that extirpation had to be abandoned ; the patient was moribund.

The uterus was now dilated to No. 3 Fritsch, and without narcosis the atmocautery was applied for twelve seconds at 112° , the patient feeling no pain. After six seconds the blood ceased to escape from the return tube, and there was no return of the hæmorrhage after the operation. The latest report about this patient is that she is in the best of health, and has had only a red discharge on three occasions, and then always very scanty.

Such a case Pincus thinks is sufficient to convert even the most sceptical, but it is only one of many.

It is, however, in cases of hæmophilia that atmocausis has had its greatest triumph, and there can be little doubt that it will prove as useful in such cases in general surgery as it has already proved itself in gynæcology.

Atmocausis is also indicated in all cases of subinvolution of the uterus, the powerful and continuous contraction thereby produced tending to a healthy involution of the organ.

To anyone who feels anxious to put the method to the test we would say, Do not let the supposed dangers or difficulties of the operation deter you, for if you provide yourself with one of the latest instruments, as supplied by Messrs. Hahn and Loechel, of Dantzig, the difficulties are very slight and easily overcome. Moreover, with each instrument is sent a short explanatory pamphlet, and though the English in it is now and then ambiguous, still it contains sufficiently clear directions to enable any one to work the instrument successfully, and at the same time to avoid the most common dangers.

It would be well, however, before trying the instrument on a patient, to have acquired a thorough practical knowledge of all its parts, for after the steam has passed for a short time through the apparatus all the metal parts get very hot, and even the india-rubber tube becomes unpleasantly warm, the only parts that can be touched without being burnt being the wooden handle to the instrument and the wooden top to the two-way cock. Till one gets accustomed to the handling of the instrument it is therefore more than probable that some time or another one will burn oneself. Now it does not tend to impress the patient if, in the middle of the operation, the operator suddenly emits a forcible exclamation of surprise, and either lets the instrument drop, or throws it violently on the table. In order to avoid such an accident, it is well therefore to get up steam and manipulate the instrument for some time, more especially practising laying it down and taking it up again, as also the turning the two-way cock back and forward through its three positions. We confess that the first time we used the instrument we received several unpleasant surprises from not having done this; and even now the metal bolt in the top of the two-way tap occasionally reminds us unpleasantly that we have been a little careless in handling the instrument.

In measuring the duration of the operation we are accustomed to get the seconds counted out by the assistant, and we have noticed that unless our fingers are on the two-way tap when the last second is called out, there is a great tendency to withdraw the catheter from the uterus without first shutting off the steam. This is likely to cause some scalding of the patient, and if she is observant she will probably be able to conclude that this was an unnecessary addition to the operation and resent it accordingly.

As soon as the operation is finished the steam should be allowed again to pass through the catheter, to clear

out the steam tube thoroughly, and as soon as the instrument is cold it should be carefully unscrewed, and the pieces soaked for some time in an alkaline soap solution; the stilette of a catheter is then passed through the return tube, and finally a stream of water forcibly squirted through it.

When putting the instrument together again we must take care that in fixing in the top piece of the catheter we only turn the mother-screw and not the top itself, for if the latter be turned round, the end of the slender steam tube which is inside will be twisted and very probably broken off.

It is hardly necessary to say that it is always better to err on the side of doing too little rather than too much, and that it is much preferable to have to repeat the operation than to have done any permanent damage; this applies more especially to operations on women who are still well within the child-bearing period. We should also choose for our first cases those in which there can be no question as to the indications, and gradually extend the indications as we get more familiar with the method.

If these few hints and directions are carried out it will not be long till the operator feels that he has become master of a new and powerful method of treating uterine hæmorrhage, which, in the words of Professor Fritsch, "is safe, painless, and effective."

SOME PRACTICAL POINTS IN THE DIAGNOSIS AND TREATMENT OF GONORRHOEA IN THE MALE. By H. OPPENHEIMER, M.D. Heidelberg, M.R.C.P. Lond. Demy 8vo, 48 pp., paper wrappers. Price 1s. 6d. net.

The extreme gravity of the immediate and remote effects of gonorrhœal infection of the female genitalia is quite sufficient excuse for commenting on this work. Dr. Oppenheim has done well to draw attention to this matter, of which too much importance cannot be made. Intimately connected with it is the frequency of prolonged latent infec-

tion in the male and its grave significance in married life both of which points are fully dealt with by the author, as also the various tests for proving that infection no longer persists. In regard to the duration of the incubation period, the experience of others as of ourselves, does not confirm the author's estimate of seven to ten days. Irrigation by Valentine's method is scarcely mentioned, and yet it is certainly one of the most successful modern methods of treating anterior or posterior gonorrhœal urethritis. The author's suggestion that a catheter should be used for filling the bladder with a fluid, to be subsequently expelled in order to flush out the urethra, cannot be recommended, while the simplicity of Valentine's method is so easy.

Complications are dealt with very briefly. Though the book only professes to give the author's methods of treatment and the results of his practical experience, it contains many valuable points worth the consideration of the practitioner.

REPORT ON THE ADVANCEMENTS OF PHARMACEUTICAL CHEMISTRY AND THERAPEUTICS FOR 1902, Volume xvi. of the Annual Series. Demy 8vo., pp. 210. E. Merck, Darmstadt.

We have had pleasure on previous occasions in drawing attention to this valuable publication as one that, though emanating from a manufacturing firm, is an impartial and scientific review of all new drugs and therapeutical preparations of any real importance. In the present volume there is no preface, and, as implied in that of last year, the account of investigations carried out in the scientific laboratories of the firm has been reserved for publication elsewhere.

We have found interesting information, in nearly every instance with full reference to its source, bearing upon the relief of pain in gynæcological affections by heroin hydro-

chlorate, aspirin and dionine; on the successful treatment of gonorrhœal vaginal and cervical catarrh by zinol (alumnol 4 to zinc acetate 1 pint), and of gonorrhœal endometritis, by intrauterine injections of a 1·2 per cent. solution of picric acid, by ichthargan, and by Credé's silver compound, itrol. In the treatment of other forms of endometritis by formaldehyde, the results of Menge and Smyly are confirmed by Odebrecht. In parametric and perimetritic affections ichthyol or its substitute thigenol are now accepted remedies.

We may also notice the effects attributed to chloride of calcium, ergotinum liquidum (Kohlmann), hydrastis canadensis and equisetum arvense in uterine hæmorrhage, and the prophylactic use of gelatine and chloride of calcium in gynæcological operations; the effects of anæsthesin, perdynamine (a ferruginous animal albumen) and arrhénil (methyl-disodic arsenate) in hyperemesis gravidarum; of chlorate of potash in habitual miscarriage; of apomorphia as a sudorific, veratrum viride as an arterial sedative diuretic and diaphoretic, and of tropacocaine as arresting the convulsions, in eclampsia; the antiseptic use of peroxide of hydrogen, vioform (*v. ante*, p. 141) (and *infra*, p. 72), lysoform (a formaldehyde soap), and of yeast, especially of zymin, an acetone yeast powder, a powerful ferment and bactericide.

In the diagnosis and treatment of incurable uterine cancer, Howitz is quoted as recommending freezing the parts with a mixture of ethyl and methyl chlorides; the healthy tissue whitens at once, the cancerous becomes slowly and incompletely pale; the diseased tissue is destroyed and removed by scraping and a granulating surface of normal epithelial texture is said to be left. Personally we have found the book most useful for reference.

The indices are good and well arranged and a useful table of the approximate prices of the drugs and preparations is appended.

A SYSTEM OF PHYSIOLOGICAL THERAPEUTICS. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Volume x. Pneumotherapy, including Aerotherapy, and Inhalation Methods and Therapy, by Dr. PAUL LOUIS TISSIER, Chief-of-Clinic in the Faculty of Medicine of the University of Paris. Pp. xvi. and 480. Large demy 8vo. London : Rebman, 1903.

We have already had the pleasure of drawing attention to some of the earlier volumes of this series as being comprehensive and practical expositions of various methods, other than drugs, which have proved useful in the treatment of the sick.

In the present volume, Dr. Tissier has followed the general plan of the series, but in dealing with pneumotherapy, a subject with which few practitioners are sufficiently well acquainted to appreciate its true worth, he has been led to give more space than has been necessary in other volumes of the series, to the history of the development of this form of treatment, and to the details of physiological experiments, the apparently contradictory results of which, he has in many instances, succeeded in reconciling.

The work is divided into two parts. Aerotherapy and Inhalation Methods and Therapy. The former includes spirometry and pneumatometry, and their possibilities in diagnosis ; the open-air treatment of phthisis ; the physiological, pathological and therapeutical effects of air, modified in various ways, liquid, cold, hot, compressed or rarefied ; and the various methods of respiratory gymnastics.

In the second part, after the discussion of the inhalation of steam and gases, and the inhalation of substances volatile, either at ordinary temperatures, or rendered so by heat, the deliberate addition of various medicinal substances to air and watery vapour, is considered. Except in regard to oxygen and sulphur, however, the pharmacological matter has been condensed, and attention been given chiefly to methods of preparation and administration and to the conditions for which medicinal inhalation may prove useful.

Before concluding with a chapter on the insufflation of powders, the author describes the use of mineral waters at their sources by inhalation, either by several patients in a chamber more or less rich in mineral vapour, by humage, in which each patient is separately supplied with warm natural vapour spontaneously liberated by mineral water in motion, or by atomisation, in which a liquid dust or spray is directed into the respiratory passages or upon other organs or surfaces. In addition to the arsenical springs of La Bourboule and Mont Dore, the various French sources of sulphuretted hydrogen, more especially Luchon, occupy most of the author's attention and, perhaps to avoid overlapping a previous volume of the series, other mineral waters, if mentioned at all, are so only incidentally. We were particularly disappointed to find no reference to the very important iodo-bromo saline baths of Salzo-maggiore, where the installation of apparatus for atomisation, inhalation and humage is, as described in the *Lancet*, July 12, 1902, most complete; the same may be said of Kreuznach, and to a certain extent of Woodhall Spa, and other places. Indeed, the author conveys, though no doubt unintentionally, quite a wrong impression, by saying (p. 434) "although for over a century humage has been prescribed at Luchon, it appears now to be limited in practice to the inhalation of sulphuretted vapours, and even more, of hydrogen sulphide."

The allusions to gynæcological and obstetrical matters are few. The modification of the thermo-cautery for the application of hot air invented by Jayle of Paris is mentioned, and the use by American physicians of sprayed hydrogen dioxide in diseases of the nose and throat, but not their employment in gynæcology (*v.* Wood, *Amer. Jour., Obst.*, 1901, March 2; *ante*, vol. xvii., p. 1), and we think atmokausis and zestokausis merited a few words. But it is interesting to learn that compressed air was accidentally found to be beneficial in anæmia and chlorosis by its effect upon the mothers who accompanied children, under

treatment for whooping cough, into the closed chamber. Tissier never obtained any notable effect from it except as regards the dyspeptic troubles, but Hayem has known the inhalation of oxygen to have a similar good effect, and to arrest the vomiting. Pinard and Peter recommend it in hyperemesis gravidarum, others in the uræmic dyspnœa of eclampsia. Eclampsia has been treated by condensed air also, and all are familiar with the use of inhalations of chloroform and nitrite of amyl to control the convulsions.

An interesting account is given of John Hunter's bellows for the mechanical insufflation of air into the lungs of the asphyxiated new born, of the abandonment of the method on account of its alleged dangers, emphysema, laceration, followed by pneumothorax and collapse of the lung; of its revival in France in 1845 and of the improved bellows invented in 1867 by Benjamin Ward Richardson. We note that Tarnier and others had encouraging results in the treatment of premature children with oxygen. There is no bibliography, the author having made use of all accessible published matter and especially of the classical works of J. Solis Cohen, M. J. Oertel, Paul Bert and J. Carvallo, but there is an admirable index, by Dr. R. Max Goepp of Philadelphia, which materially adds to the value of the book, and that is no slight one, as a work of reference. It is well bound and printed and profusely illustrated.

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Austellung von Original-Werken zur Geschichte der Anatomischen,
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BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JULY 9, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

ON LACERATIONS OF THE CERVIX AND THEIR CONSEQUENCES. By JOHN W. TAYLOR, M.D., F.R.C.S., Professor of Gynæcology in the University of Birmingham; Surgeon to the Birmingham and Midland Hospital for Women.

MR. PRESIDENT AND GENTLEMEN,—In opening the discussion this evening on "Laceration of the Cervix and their Consequences," I should like first to thank the Society for the honour they have done me by inviting me to take this part in the duties of the evening, and then—as there will, I hope, be many speakers—to enter at once upon my subject and to treat it as plainly and concisely as possible from the practical aspect of the practising gynæcologist.

And in doing this, I would ask the Society to remember that although the subject of my paper belongs rather to minor gynæcology, it has an important bearing on what is, perhaps, still the gravest disease to which a woman is subject—I allude to puerperal septicæmia—and that, by

means of this, laceration of the uterine cervix becomes a not infrequent cause of death.

In most of the septic cases to which I am summoned after labour I find serious laceration of the cervix, of the vagina, and of the perinæum as the wounds from which the septic and generally fatal process has started.

So that, although this may belong rather to the province of our sister Society than to ourselves, it is well, I think, at the outset of our discussion to recognise its gravest bearing on the great issues of life and death, and to see to it that our influence is exerted as strongly as may be on the side of prevention. For there can be no doubt, I think, that certain countries and districts furnish many more cases of this accident than do others, and that its comparative infrequency in any district closely corresponds with the better teaching and practice of the obstetricians of the district. Many years ago, when attending gynæcological clinics in Paris, I was particularly struck with the comparative rareness of any severe cervical laceration among the attending patients, and have no doubt that this was largely due to the teaching and influence of those great obstetricians and their assistants who were then doing so much for their specialty in the French capital.

Death, then, as a not infrequent consequence of acute septic laceration of the cervix, and laceration, as a largely preventable accident, are the two points from which I start. But, fortunately, many cases of laceration escape serious sepsis immediately following labour, and heal without difficulty. The greater number of these, like minor lacerations of the perinæum, are of very little importance, heal in a right direction, and need no treatment. The lesser number are more important; many of them are really ruptures of the lower part of the uterus, they often extend quite above the vaginal roof into the broad ligament of one side: they heal, not by any direct union of the raw surfaces, but by growth of epithelium over the raw surfaces. Consequently, the patient recovers with one or

more deep permanent fissures in her cervix, and with cicatrices in the vagina and supravaginal tissues. It is mainly with these that I shall have to deal.

First of all, they seriously interfere with the proper involution of the uterus, and although the patient remains much longer in bed than usual, when she begins to get up the uterus itself is still enlarged and heavy, and the torn cervix is often flabby and gaping. Then, in addition to weight, menorrhagia and backache, which may be put down largely to subinvolution, other important consequences are apt to follow, which I will briefly consider under three heads :—

Firstly, as affecting the position of the uterus ; secondly, as affecting the nutrition of the cervix ; thirdly, as affecting the uterine wall at the angle of the tear.

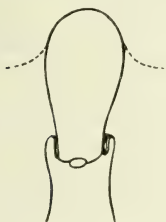


Fig. 1.

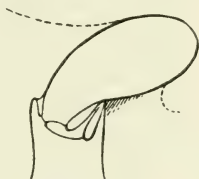


Fig. 2.

DIAGRAMMATIC FIGURES OF UTERUS AND UPPER VAGINA.

First, then, as regards the position of the uterus.

Let us suppose that the laceration is left-sided, extending into the vaginal roof and left broad ligament.

The uterus, which has formerly maintained a central position in the pelvis, being equally supported on both sides (fig. 1), has lost this support on the left side, and consequently settles down in the pelvis on this side, taking its fresh bearing (on the left) from the highest limit of the tear. With this, the sides of the laceration separate, and

some tension necessarily occurs at the angle of the tear (fig. 2). This "dragging" usually causes pain on the side affected; pain increased on standing or walking, or exertion, and relieved by rest in bed.

Secondly, consequences affecting the nutrition of the cervix.

The gaping of the tear causes exposure of the cervical canal, the cervical mucous membrane becomes mechanically irritated, and much more easily affected by micro-organisms; the cervical glands increase in size, in number and in activity; and an excessive amount of glairy mucopurulent discharge hangs about the cervix, or gradually finds its way to the outside surface through the vagina.

In this way, or by more direct infection (after intercourse or miscarriage), some secondary sepsis sooner or later almost always attacks the already irritated cervix. The tear or tears, which already interfere mechanically with the circulation in the cervix, affect the inflammatory process. A subinflammatory œdema is added to the endocervicitis. The fissured and distorted cervix swells. The swelling affects the mucous and submucous tissues chiefly, and these bulge outwards, causing eversion of the mucous membrane. The ducts of the cervical glands become obstructed by the swelling, and the well-known distended follicles, or "ovula Nabothii," form in the substance of the cervix, and are easily felt by the examining finger.

In consequence of the endocervicitis and eversion the cervix around the opening or "slit" of the cervical canal becomes inflamed and red, and easily bleeds on touch. It also becomes tender, pain is felt on coitus, and, because the cervical canal is obstructed either by the swelling or by the discharge, the patient is usually sterile, or, if conception ever takes place the patient is liable to abort. I need not dwell on this portion of my subject, the changes induced by laceration with chronic cervicitis, the swelling, the eversion, and the erosion are well known to all of us. The process very generally slowly increases until, instead

of a recognisable portio vaginalis, we find a florid, spread-out swollen surface, bathed in muco-pus with streaks of blood, closely imitating that produced by epithelioma, and occasionally, but very rarely, as in other irritated junctions of mucous membrane and skin, passing into this by almost imperceptible gradations. Such is the picture of a typical cervicitis, the main predisposing cause being the injury and exposure produced by various lacerations of the cervix, the exciting cause being some septic infection of the irritated cervix.

Thirdly, consequences affecting the uterine wall at the angle of the tear.

In process of time—whether by unequal tearing, or by traction on the torn angle, or by atrophy at the point

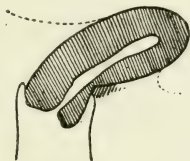


Fig. 3.

LONGITUDINAL SECTION THROUGH UTERUS, A LITTLE TO ONE SIDE OF A DEEP LACERATION (DIAGRAMMATIC).

of flexion—if the laceration be severe (as I have described) the uterine wall at this part is apt to become specially thin and yielding, and on paring it, as in the operation of trachelorrhaphy, it may be found that the uterine wall here is thinner and narrower than at any other part, either above or below the limit of the laceration (fig. 3). This necessarily interferes with the permanent strength and stability of the uterus on the side affected, and with the perfect success of any operation intended to restore the parts to their full natural shape, position and efficiency.

If I now recapitulate the consequences of laceration on which I have lightly touched, I find, first, that those

of minor degree have no consequences ; and second, that those of major degree, in addition to being a favourite channel of fatal sepsis, may cause subinvolution, serious menorrhagia, uterine descent and flexion (by reason of the injury to the vaginal roof), cervicitis, with all its consequences, pain, usually directly referable to it, abortion, sterility, atrophy of the uterine wall at the highest limit of the tear, and finally (but very rarely) epithelioma. With regard to this last (possible) consequence of neglected laceration, it is reasonable to suppose that it may occur, and I have seen one case, but only one clear case, in which a badly lacerated cervix became carcinomatous. The frequency of this growth, as a sequel to laceration, has, I think, been much over-stated. As a rule a lacerated cervix with chronic cervicitis remains a lacerated cervix with chronic cervicitis, and does not grow into anything different from this.

On looking over my list and asking myself how far minor surgery can deal successfully with all these troubles, I find a sharp dividing line is drawn between the consequences due to uterine laceration only and the consequences due to injuries extending beyond the uterus.

The subinvolution and chronic menorrhagia, the cervicitis in all its forms and degrees, and the weakening discharge inseparably connected with this, in other words, the troubles due to the uterine lesion and to the uterine lesion only, can all be thoroughly and completely cured by the operation of repair of the laceration, and by this combined with a preliminary curetting. A wedge-shaped excision of the cervix is rather often needed (at the same sitting) before the lacerated parts can be brought together and repaired, and the whole angle of the tear needs, of course, complete excision ; but in one way or another it is nearly always possible to reform the cervix, to stop the discharge of years, to cure persistent menorrhagia, and in a fair proportion of cases to restore the patient to good health.

But when there is something more than the uterine lesion, when the injury extends widely into the vaginal roof and broad ligament, then, however perfectly the uterus itself is repaired, there is something still wanting. The faulty position of the uterus, the cicatrix in the broad ligament, the consequent dragging on this, these are still sources of pain and discomfort, and the patient—however perfect the cervix may appear as seen through the speculum—is still more or less unrelieved.

In such cases, at the repair of the laceration I have sometimes tried to re-attach the broad ligament to the cervix at its proper level, but with only partial success, and in the worst of these cases the only thorough relief to be obtained is, I believe, by removal of the uterus.

In one case of this kind in which I was consulted, I found that the patient, a young married woman, who had formerly lived an active and vigorous life, had become a hopeless invalid, unable to do anything, and a hopeless burden to herself and her friends. She had a contracted pelvis, and at her first and only confinement the child had to be destroyed by craniotomy.

An extensive laceration occurred through the cervix into the vaginal roof, and this was directly followed by constant pain and invalidism. There was nothing else the matter, and there could be no reasonable doubt that the laceration was responsible for the pain and disability.

I advised hysterectomy, as I did not think that any simple repair would be so efficient in relieving pain, and the possibility of any recurrence of the danger seemed to call for prevention.

The result has been extremely good. There is no pain now, and the patient is again leading an active and useful life.

Such cases need the most careful diagnosis in the highest sense of the term. Some of the severest lacerations, extending into the bladder and rectum, may cause no pain afterwards, while an aseptic laceration which has healed

throughout, but on which the uterus is always dragging, may be a source of constant discomfort. The fixation of the organs in some of the worst cases is undoubtedly a safeguard against pain.

Dr. WILLIAM DUNCAN felt that they were all deeply indebted to Professor Taylor for his admirable introduction to the discussion of a class of accidents that were continually coming before them both in hospital and private practice. Perhaps, inadvertently, no mention had been made of the serious immediate result of laceration, namely, severe hæmorrhage. He (Dr. Duncan) had on three occasions been consulted because of severe arterial hæmorrhage immediately after delivery. In one case in the country, after a breech presentation, the patient was supposed to be bleeding to death from post-partum hæmorrhage, and was certainly in a very bad condition when he arrived, but palpation proved that the uterus was well contracted, and he found that there was a very extensive laceration of the cervix. By separating the edges of the laceration with tenacula he was able to discover and suture the bleeding point with silkworm gut with perfect success. In similar cases of hæmorrhage it was sometimes sufficient to use the hot-water douche, or at most to apply a tampon of perchloride of iron solution on cotton wool, but he thought it better surgery to secure the bleeding vessel and sew up the laceration at once; indeed, he was not sure that even when there was not bleeding an extensive tear should not be repaired immediately. With regard to the remote consequences, it was true that when lacerations extended above the vaginal roof and were not properly treated, sepsis was very liable to occur, with the danger, even if the patient recovered, of adhesions contracting and dragging the uterus over to the side affected, and of various ill results afterwards, but in his experience the great majority of tears in the cervix, especially of those affecting one side only, required no treatment at all. When the laceration was extensive it might lead to the evil consequences men-

tioned by Professor Taylor. One of such consequences, the thinning of the uterine tissue in the neighbourhood of the tear, had not been brought under his notice before, but would probably account for an accident he had lately had to deal with. A lady from the Cape, who had had an extensive unilateral laceration of the cervix, the edges of which had healed perfectly—nothing else appeared wrong with the cervix and there was no distension of the glands—consulted him for bulky subinvolted uterus with menorrhagia and leucorrhœa, and he recommended that the uterus should be dilated and curetted. The dilatation was conducted with ease, and was almost completed, when, on withdrawing one of the higher dilators, which had been passed quite easily without the slightest extra force, there was furious hæmorrhage. The uterine artery, to his surprise, and not a little to his horror, had been torn. He was able to seize the bleeding point in a pair of long pressure forceps, which were left on for forty-eight hours. He curetted the uterus, and the patient did perfectly well.

Mr. W. D. SPANTON said that the recognition of the importance of laceration of the cervix had been of comparatively recent date. No mention was made of it in the books of one's student days. Its greater frequency now might be due in part to the freer use of instruments, as well as the impatience of the younger race of practitioners. They had now to deal with lacerations of uterus and perinæum, where formerly they had to remedy fistula of various kinds caused by pressure from undue delay. The chief significance of lacerated cervix lay in the fact of its capacity for developing troubles in the future. Recent lacerations, were, however, sometimes a source of grave danger. He had lately been asked to see a woman in good circumstances on whom forceps were used, resulting in a tear of the cervix so deep as to lead to septic cellulitis, and death within a week. The practitioner in charge had sutured the tear in the perinæum, but had ignored the graver mischief higher up, which led to the patient's death.

Such calamities might, of course, happen to anyone, but they ought to be recognised and properly treated at once. At the same time he dissented from the opinion of those who would stitch up every laceration immediately. The slighter ones did no immediate harm, and might safely be left. The more serious ones, however, should properly be tackled as soon as recognised. He had seen several cases where a lacerated cervix had resulted first in chronic hypertrophy of the lips, and afterwards in malignant growth, and had been led to the conclusion that a considerable proportion of the cases of epithelioma met with had their origin in this manner. He need not speak of the minor troubles, such as chronic cervical metritis; they were well recognised, and known to require active treatment. Except in the early stages, palliatives did not avail much, and he always now advised and relied upon more active measures, and in the whole course of his experience of a very large number of such cases had never seen any evil result, and thought none such ought ever to occur when proper precautions are taken. In those cases in which there was a simple laceration with ectropion he found Emmet's operation the best; but when the lips were large, whether from simple hypertrophy or glandular fulness, by far the best method was to excise an ovoid wedge from each, carrying the incisions laterally through the dense tissue of the tear so as to leave the mucous lining practically intact, and then suture the cut surfaces on each lip and at each side. This method he found gave the best results. In women past the menopause it was far better to excise the whole of the lower portion of the cervix and make a sound stump of normal tissue. A lady for whom he had done this about ten years ago, whose cervix, according to the microscopical report, was undergoing degenerative changes described as very suspicious, recovered completely and never had further trouble. Details of such cases were needless in such a Society; one rather aimed at expressing conclusions definitely arrived at after a long and varied

experience. He was firmly convinced that much harm was done by tinkering, and the safest as well as the quickest method of curing the after-results of a lacerated cervix was to excise all unhealthy tissues and replace them, as far as possible, by others from the immediate neighbourhood which were in a normal condition.

Mr. BOWREMAN JESSETT said it was an interesting question whether lacerations of the cervix were more common now than formerly. In his earlier years, when in general practice, he did not remember having had to deal with a single laceration of the cervix, though he must have attended about 1,500 cases of midwifery. But in that large number of cases he did not apply the forceps more than half a dozen times. He shared the opinion of Mr. Spanton that, owing to the general practitioners being more in a hurry than formerly, or perhaps because they were more adept with the instruments, they were apt to apply forceps and deliver the child as soon as possible, and that therefore there were more lacerations of the cervix than there used to be. His own experience in regard to epithelioma differed from Professor Taylor's, for he had in a considerable proportion of cases of that disease found that it had been preceded by laceration of the cervix, but he could not assert that the laceration was the cause of the epithelioma. He thought if these injuries were detected, and when deep were sewn up at once and kept aseptic, evil consequences would, to a great extent, be avoided. Complete hysterectomy seemed to him to be rather a radical measure, but in several cases of deep laceration he had performed supravaginal amputation of the cervix with perfectly good results. In women before the menopause some care was required to keep the canal open afterwards.

Dr. T. A. HELME warmly acknowledged the interesting way in which Professor Taylor had been able to bring a rather hackneyed subject before them in his very able address, but could not sympathise with the views expressed, for as far as he was concerned, he had to a great extent

relegated cervical lacerations and the tinkering operations done for them to the limbo which had received the écraseur and old-fashioned clamp for hysterectomy. Professor Taylor had drawn a harrowing picture of the ills that might result from tears in the cervix, but in his (Dr. Helme's) opinion the cervical lacerations were merely antecedents, not causes, and there was little use in locking the stable door after the horse had been stolen. He admitted that such injuries increased the risks of childbirth, but not that they might in and of themselves cause subinvolution or displacement of the uterus; and when lateral flexion of that organ occurred after tears of the cervix, in his experience it had been not towards the side of the tear, but in the opposite direction. Such flexion he attributed not to the tear, save so far as the tear preceded the subsequent inflammation in the cellular tissue, which was the real mischief, and he could not see that any good would be done to the displacement by stitching up the tear long afterwards. He had never yet been able to satisfy himself that any evil followed a laceration of the cervix which was allowed to heal in the usual way, not by union, but by covering over the torn surfaces provided there was no septic mischief. He was convinced that mere laceration of the cervix was in itself of no importance, and that it did not in itself require operation in the vast majority of cases. The evils that might ensue he attributed to infection. He agreed with Dr. Duncan that severe hæmorrhage after labour might be caused by deep laceration of the cervix, and in one instance of such he stitched up the cervix, when the woman was almost dying, with silver wire; the wire was removed at the end of a week, but secondary hæmorrhage came on with a fatal result. He thought sufficient importance was not laid on the primary results of laceration; he did not advocate looking at the cervix after every labour, and stitching it up for every little tear. Inflammation, when it followed laceration, of the cervix was not limited to the cervix, and even amputation left

the mischief behind. He did not wish to appear as laying down an absolute rule that tears of the cervix should never be repaired, but rather to emphasise the point that the mischief is, generally, *deeper* than the tear, and stoutly to oppose any tendency to indiscriminate operation upon every tear which existed. It might be one's duty, as had been necessary in many cases already, to remove the uterus to give the patient a chance of health.

Mr. SKENE KEITH thought that Professor Taylor might perhaps have been led to advise the removal of the uterus in cases of extensive tears of the cervix because he had not quite realised the absolute necessity, when operating for the repair of a laceration, of removing every atom of cicatricial tissue. This could generally be done without causing much hæmorrhage, but he did not agree with Dr. Helme that such operations could be termed "niggling" methods; he had known instances as formidable as removal of the entire uterus.

Dr. HELME explained that he spoke with regard to results only. It was the gravity of the operation compared with its possible advantages that he objected to.

Mr. SKENE KEITH (continuing) said the majority of women who had borne even one child had a lacerated cervix, but in ninety-nine cases out of one hundred the tear gave no trouble, for laceration might not leave any hard tissue. But if a woman had a big, eroded cervix she did not conceive, or, if she did, she aborted. If the hard tissue due to a laceration were completely excised, and no new hard tissue were allowed to form, the leucorrhœa would cease, and the woman would within a comparatively short time regain her health, and very possibly conceive. Even in cases in which the ovaries had suffered and their removal been advised, he had been able to put the woman right by attending to the cervix in the manner he had described. He had no doubt that the rupture of the uterine artery described by Dr. Duncan was due to the presence of cicatricial tissue. He had not for a long time

had much experience of midwifery, and could say little of the results of immediately stitching up a laceration. A general practitioner, with no one but a nurse to help him or give chloroform, could hardly be expected to do such an operation as the repair of a torn cervix at the end of a probably long confinement. Under such circumstances he thought it would be better for him not to undertake it. The relation of cancer to laceration of the cervix was not determined, but he had never seen cancer in a virgin uterus.

Dr. MACNAUGHTON-JONES said that there was a point with regard to diagnosis worth drawing attention to. Many lacerations escaped detection owing to the examination being made with Ferguson's speculum, which compressed the lips of the os together. To see the extent of the laceration a Sims' speculum, and hooks to separate the edges of the laceration, were necessary. It should not be forgotten that the clinical importance of laceration of the cervix was fully recognised and insisted upon by the older obstetrical authorities. Mauriceau and Smellie, Hamilton, of Edinburgh, Collins of Ireland, had specially referred to them. The negative view of the influence of laceration was represented in its extreme shape by Noeggerath, who denied its bearing on conception, as well as almost all the clinical consequences which were usually believed to follow on the lesion. It was not, however, to be supposed that authorities such as Mundé, Emmet, and Thomas in America, or Schroeder in Germany, with all their great experience, were mistaken as to such effects. He (Dr. Macnaughton-Jones) was speaking of serious lacerations such as those Mr. Taylor had referred to. There could be no doubt that associated with these lacerations of the cervix were found retroversion, subinvolution, hyperplasia, endometritis, erosions and ectropion. Relaxation of the uterine supports, associated with the general flabbiness of the uterus, produced the displacements. The characteristic appearances of the cervix graphically described by Mr. Taylor were familiar to all, and hæmorrhage or

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menorrhagia was no infrequent complication. As to the cause, it should be remembered that laceration followed even in the most experienced hands, and was not necessarily due to instrumental delivery. In view of certain consequences found in the wake of the lesion, he maintained that operation was the only satisfactory treatment, and that in the graver cases amputation of the cervix was called for. Palliative treatment by tamponing with ichthyol and glycerine, or glyco-thymoline, while it might benefit some milder cases, had no effect on the more serious. As to carcinoma, though he had only seen two cases in which it had followed upon extensive laceration, it could not be denied that extensive erosions and ectropion did predispose to the subsequent malignant degeneration. The scar tissue referred to by Dr. Skene Keith compressed and obliterated the vessels and glands of the cervix, while the compression of its nerves undoubtedly led to reflex neuroses. It was not possible to speak definitely of the effects of laceration on subsequent pregnancy and labour, but that it must have some effect on these was certain. He did not think that, save in the case of hæmorrhage, it was well to interfere at the time of labour with the laceration, but he thought it was a moot question if it would not be advisable within a given time after labour, when the delivery was instrumental or in a primipara, always to make an examination to ascertain the condition of the uterus. The discussion was one which would prove useful by directing renewed attention to the consequences of a lesion which interferes with the integrity of the uterus, and which practitioners had constantly to treat .

Dr. MANSELL MOULLIN agreed with the opinion that had been so generally expressed that laceration of the cervix, in itself, was of little importance ; still, it was often complicated in a way that called for active treatment. One of its most frequent complications was chronic disease of the adnexa with perimetritis. Quite recently he had had to remove the ovary and tube from one side

of a patient on account of inflammatory trouble following laceration of the cervix, which occurred six years previously. Another condition which called for interference was ectropion of the mucous membrane, for which Emmet's operation appeared to be the most beneficial treatment. There was no evidence to show that laceration led to malignant disease; more than once he had seen such disease of the cervix within a year of Emmet's operation, but that merely showed how difficult it was to diagnose malignant disease in its early stage.

Mr. GEORGE KEITH concurred with what had been said about the absolute necessity of removing all cicatricial tissue. Occasionally, when it had been necessary to follow it up very high, he had known the patient, on the evening of the operation, to become suddenly very ill, with a quick pulse and subnormal temperature, probably because the peritoneum had been caught in the suture; at all events, all the symptoms disappeared in an hour or two after the top stitch had been removed.

The PRESIDENT thought the discussion had been a most instructive one, and it would be an encouragement to those practising midwifery to know that in the opinion of so many of the Fellows of the Society, provincial as well as metropolitan, lacerations of the cervix, unless they were extensive, were not generally followed by mischief. But it should not be accepted that the consequences of a laceration were to be absolutely measured by its depth. Sepsis might follow a small tear and give rise to most serious trouble. The presence of scar tissue might lead to ectropion, and when the lips of the uterus were everted and the power of imbibition lost, conception was impossible; for this condition Emmet's operation was a most valuable proceeding. There were other conditions following laceration in which operation was not absolutely required, if the tear was not a deep one. He entirely agreed with Mr. Skene Keith in attributing persistent backache and bearing down to the presence of scar tissue, and when the knife

could be dispensed with, very great benefit might be derived from the careful application of potassa fusa. This was better than the actual cautery, the action of which was limited by its own scar, whereas, under the action of the caustic potash, when the shell had been pierced, the scar tissue was pressed forwards by the contractile tissue behind it, and by successive applications could be destroyed as completely as necessary. There was no doubt that the adnexa might be involved in the inflammation set up in the cervix and uterus. On the whole, he thought that after the discussion that evening, the conclusion must be that lacerations of the cervix, though frequently giving rise to no serious trouble, were by no means unimportant, and that their effects upon the patient's local and general condition should be carefully watched, with a view to treatment according to the indications of each individual case.

Professor TAYLOR, in reply, explained that as the immediate results of laceration were rather obstetrical than gynæcological, he had not dwelt upon them, but, of course, serious hæmorrhage after labour was often due to a torn cervix. In a small cottage with poor light and insufficient help it might not be possible to do as Dr. Duncan had done, and secure the bleeding point, but one might then sometimes stop the hæmorrhage by carefully applying a volsella, which might be left in position for twenty-four or thirty-six hours. It had been well brought out in the discussion that laceration of the cervix was to a very large extent preventable, and though, as Mr. Spanton pointed out, we did not now so often as formerly see some evil results, such as fistulæ, he thought there was in the midwifery practice of the present day too great a tendency to hurry. He quite agreed with those who said that minor lacerations of the cervix were generally unimportant, and with Dr. Helme that trouble after a laceration was largely due to sepsis, either primary or secondary. But deep laceration of the cervix materially altered the circulation of the blood

in the part, and the inflammation which occurred in such a cervix was altogether different from that which attacked one in which the blood-vessels were controlled by the integrity of the tissues. Therefore, while admitting that the sepsis was the most important matter, he held that severe laceration in the cervix should be repaired, and he fully recognised that all cicatricial tissue should be removed ; indeed, he had said in his paper that the whole angle of the tear should be most completely removed. He thought that as diagnosis became more accurate, fewer cases would be met with in which it seemed clear that epithelioma had followed directly upon laceration of the cervix.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, OCTOBER 8, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

SPECIMENS AND CASES.

THE PRESIDENT showed a uterus and tumour removed by supra-vaginal hysterectomy, and read the following notes of the case :—

CALCAREOUS DEGENERATION OF A FIBROID TUMOUR. By
HEYWOOD SMITH, M.A., M.D.Oxon., M.R.C.P.Lond.

A. R., a married but sterile woman, aged 32, consulted me in March 1885. Her catamenia, established at 15, were regular, lasted four days, and were accompanied with much pain, and in July, 1884, she began to suffer from pain in the sacral portion of her spine. A small, hard tumour could be felt in her hypogastrium. On vaginal examination, the os was found rather far forwards, the uterine sound passed up, back, forwards, and a little to the right for 3·25 inches. Pressure on the tumour from above moved the uterus, but not altogether directly. No hæmorrhage.

In August, 1886, she consulted a well-known gynæcologist, who opined that the tumour was not of a kind that would grow rapidly, but in 1887 I found that the tumour had increased in size and hardness, and was more independent of the cervix, in front of which it lay.

In June, 1903, the patient being then aged 50, the catamenia continued, though they were not excessive, but the tumour had grown to two or three inches above

the umbilicus and was very hard, and it appeared to be independent of the uterus.

On June 25 I operated, with the assistance of Mr. Dansey Smith. An incision was made from about three inches above the umbilicus to the pubes (about eleven inches) when a large mottled, pale, hard tumour came into view; this was lifted out of the abdomen. The right ovary, the size of a Tangerine orange, burst, and thick black matter exuded, and another cyst with fluid contents also gave way; it was ligatured and removed. The left ovary was also cystic, and, being thin, also burst, and it was removed.

Below, the tumour was attached to the fundus by an apparently elongated pedicle of uterine tissue; an attempt to strip off the tumour was followed by some rather smart hæmorrhage, so a ligature was passed round the pedicle and the tumour cut away. The uterus was then found to be studded with several fibroids; the left broad ligament was therefore then tied and cut free; the left uterine artery was caught with an aneurysm needle and ligatured, the peritoneum divided above the bladder, and that viscus was stripped down. The posterior flap was then made, the cervix cut across, the right uterine artery tied, and finally the right broad ligament tied and divided. There was some oozing deep in the pelvis on the left; this was arrested with adrenalin. The cervical canal was touched with strong carbolic acid, the raw surface of the cervical stump was drawn together with three strong silk sutures, and the pelvic floor was then sutured right across. The abdominal wound was closed with three layers, the peritoneum with a continuous suture of fine silk, the muscles and fasciæ with interrupted silkworm gut, and the skin with a continuous fine silk suture, thirty-one stitches having to be made. The wound was dressed with iodoform gauze and collatin plaster.

On trying to make a section of the tumour it was found to be almost impossible, as the whole substance seemed

everywhere permeated with calcareous deposit. Why should some tumours be prone to such degeneration? Has it any connection with the gouty diathesis?

Dr. MACNAUGHTON-JONES referred to a case that he had brought before the Society, of a large myoma, in the centre of which was a mass of necrotic tissue, surrounded by a deep layer of calcareous material, which was only discovered on section of the tumour after removal. In that particular case the hysterectomy was performed more on account of the mechanical effects of the tumour than for the other symptoms, though the pathological condition must, had the operation not been performed, have resulted fatally to the patient.

Dr. BEDFORD FENWICK said that as fibroid tumours were so often comparatively harmless till they began to degenerate, the cause of such degeneration was very important. He had noticed that calcareous tumours, of which he had seen a considerable number, invariably, as in the President's specimen, had very small pedicles, and in cases he had examined he had found that the blood vessels were of small calibre in comparison with the size of the tumour they had to supply; he therefore thought that the cause of calcareous degeneration was the want of an adequate blood supply. Moreover, the same cause was in action in other forms of degeneration, whether simple breaking down or sloughing, for, as he had himself pointed out some time ago, the walls of the ovarian and uterine vessels in cases of myoma were almost invariably greatly thickened, a condition which had been still more clearly described by Mr. Stanmore Bishop more recently. The President had not described this tumour as adherent to the surrounding parts; in his own experience adhesion to the intestines and omentum was less common in calcareous cases than when the degeneration was more rapid.

Mr. BOWREMAN JESSETT said that he thought the application of carbolic acid to the stump was more likely

to promote sloughing than otherwise, and that though it used to be the practice to stitch the flaps of the cervix together after amputation, the general opinion now seemed to be that it was better not to stitch the uterine tissue. He had found that for closing the parietes, properly prepared catgut was far superior to silkworm gut or silk; at the end of ten days the whole of the gut had disappeared, and there was no more trouble; with the other sutures stitch abscesses were not uncommon. He regarded the union of the superficial and deep fasciæ as the most important points, and after securing the peritoneum, together with the edges of the deep fascia, by a continuous gut suture, he applied two or three interrupted sutures through the muscular tissues, then with another continuous gut suture united the superficial fascia and aponeurosis; finally, he stitched the skin with a continuous suture of horsehair.

Mr. MAYO ROBSON said that he had seen many fibroid tumours in calcareous degeneration, and though the majority were calcareous on the surface and were attached by small pedicles, that was not invariably the case. He instanced a case he had recently operated upon, and in which he had opened an abscess in the centre of a large fibroid in a lady past the menopause. The cavity contained a pint and a half of foetid pus, and several calcareous masses came out from the centre of the tumour. He could not, therefore, accept Dr. Bedford Fenwick's explanation for all cases, but thought that calcareous salts might be deposited in a fibroid in process of atrophy and degeneration, as they might be in other quiescent growths. He was astonished to hear that anyone nowadays had trouble with the sutures of the abdominal wall. He was convinced that catgut, properly prepared and used with care by skilled hands, was the best material possible. He used a single needle with catgut prepared by the xylol process he had lately described (about the 00 size), and ran a continuous suture through the peritoneum from one end of

the wound to the other, taking in the internal aponeurosis with the peritoneum; he then carried the same stitch back through the front aponeurosis and tied it off at the end of the original suture. He had absolute confidence in that method, and it was the rarest occurrence to have any trouble arising from it. The surface stitches, also of catgut, he inserted separately, and took care not to draw them tightly. When non-absorbable material, such as silk or silkworm gut, were used there would at times be trouble with the wound.

Dr. RICHARD SMITH said in his experience calcareous fibroids had generally been very large, and had existed for a very long time. He still met with many men who had great faith in chloride of calcium for menorrhagia, and asked whether that treatment had been employed in this case.

Dr. HERBERT SNOW said that these cases were particularly interesting, partly from their exceptional nature and partly from our entire ignorance of their pathological causes. He felt some slight doubt whether the term calcareous degeneration was invariably justified, and whether the phenomenon might not sometimes be related to a very rare condition found elsewhere. In the museum of the Cancer Hospital there was a specimen of a woman's breast entirely converted into a dense ivory mass many degrees harder than bone, though approximating the latter in microscopic structure. He also remembered Mr. Jessett removing a breast studded with several bonelike nodules. He could not establish any relation between those cases and the one under consideration, but he would be particularly interested to learn whether in the calcareous degeneration of this fibroid there was any approach to the structure of bone.

Dr. JAMES OLIVER pointed out that in the calcareous degeneration of ovarian cysts nothing very remarkable was to be seen in regard to the vascularity, and therefore he did not think that the vascularity, to which the

President seemed to attach some importance, could account for the degeneration; he attributed it rather to some constitutional condition of the patient.

The PRESIDENT, in reply, said that the tumour had not begun to suppurate. It seemed remarkable that the deposit should have been so uniformly disseminated throughout the whole of the tumour. As he had not seen the patient for sixteen years after he had eighteen years ago found the tumour, he could not speak as to the rate of its growth, nor whether the calcareous degeneration was comparatively recent or had been going on, *pari passu*, with the growth of the tumour. No microscopic examination had yet been made, but he would have one carried out. Mr. Rushbrooke, under whose care the patient had been, would tell them the medicinal treatment employed.

Mr. T. RUSHBROOKE said that electrical treatment was employed for a short time, but he believed the patient had had nothing in the way of drugs except some ergot occasionally.

The PRESIDENT then read the following notes in connection with other specimens which he exhibited :—

SCLEROSIS OF THE OVARY.

By HEYWOOD SMITH, M.A., M.D.Oxon., M.R.C.P.Lond.

CASE I.—M. L., a single woman, aged 24, came under my notice on September 4, 1902. Her catamenia, established at 14, had been regular till twelve months previously, but now came every two or three weeks, and lasted six days. She had had pain in the left inguinal region, before and during the flow, for the last two years. She had been curetted some three months previously, and the next period had been much easier. Vaginal examination disclosed a rather follicular cervix; the sound passed 2·5 inches in the natural direction with some fundal pain. There were no lateral swellings, but some tenderness in the left fornix. The abdominal walls were rigid.

On September 24 I operated, when both ovaries were found free and small; but the left was much smaller than normal, and it was removed with the oviduct. On section the envelope was seen to be abnormally thickened and smooth, with scarcely any folds, and the stroma dense with small cysts. The right ovary was left. The patient suffered from chloroform sickness, and, no doubt as a consequence, a swelling (probably a hæmatoma) formed, which eventually cleared up, but left a good deal of pain behind it. She was subsequently admitted into the Torbay Hospital, where, about the end of December, an abscess in the left fornix burst into the bowel. On January 21 of this year she was operated upon in that hospital, and the right ovary, which was reported cystic, was removed. She continued to suffer pain, and in August I saw her with the surgeon in the hospital, and examining her under ether, found the uterus free and movable, and considering the pain neurotic, she was put under treatment and is recovering.

CASE 2.—E. M. M., aged 33, and married nearly six years but never pregnant, consulted me this year. She had been treated in Cape Colony for inflammation of the ovary, and had to lie up three months. Her catamenia had been regularly established at 14, lasting five to six days, with very free discharge and slight supra-pubic pain before the flow. On vaginal examination the uterus was found movable and small, with small follicles; the sound passed in the natural direction for 2·5 inches. On deep pressure on the left side a tumour was felt, slightly elongated, tense and tender. On consultation with Mr. Bland-Sutton, we agreed to perform cœliotomy, and this took place on April 17.

Operation.—The right ovary was the size of a small orange, and burst during extraction; it was removed. The left ovary was slightly enlarged and corrugated, the oviduct, thickened and blocked with inflammatory deposit, was also removed. On a section being made

the ovarian stroma was seen to be dense throughout, with some denser white masses and two small corpora lutea.

I have brought these two cases of sclerosis of the ovary, as they present some features in common, and also one striking difference on which I should like to hear the opinion of the Society. In both there was considerable menorrhagia with dysmenorrhœa; the former condition is a frequent accompaniment of disease of the ovaries, while the dysmenorrhœa, and that of an intense form, is constantly associated with sclerosis. It seems that the preliminary inflammation when it becomes chronic is associated with increased blood supply and enlargement of the vessels, and on the stroma becoming thickened and contracted the menstrual molimen gives rise to arterial tension in a tissue which is more or less unyielding. But the chief point I wish to draw attention to in these two cases is the difference in the surrounding envelope. In the former case it is thickened, and on the whole smooth: in the latter, while it is also thickened, it is corrugated on its external surface, and presents the exact appearance of the surface of a brain. Now what is the cause of this difference? Is it in the one case that the stroma is uniformly thickened and very dense, and so contracts uniformly, and in the other that the stroma becomes specially dense in the interstices between the Graafian vesicles and the blood-vessels, and so in its subsequent contraction produces the uneven surface you see?

The PRESIDENT showed a specimen of

SALPINGITIS.

CASE 3.—In May, 1898, I was consulted by a woman, aged 22, on account of a yellow vaginal discharge which had persisted for six months and was sometimes offensive. She had been married for three years and a half, had one child, aged $2\frac{1}{2}$, which she had nursed for three months, and she had never aborted. Her catamenia, established

at 15, were at first regular, but for the last six months had returned every three weeks and lasted five days. Her bowels moved freely, but with some pain across the front of the abdomen. The fundus uteri was rather bulky and wide; the sound passed 3.25 inches in the normal direction. She was benefited by treatment at that time; in 1900 she was treated for perineal warts, probably gonorrhoeal, and it seems that she aborted in the next year. In November, 1902, she was confined of a living female child which she did not nurse. The following December she was complaining of a copious yellow discharge with severe pain in her hips and back, and above the pubes; vaginal examination showed a patent os with a hard and granular anterior lip.

In January, 1903, curetting of the uterus by Mrs. Scharlieb relieved her for a time, but in April the pain returned. The uterus was then distinctly enlarged and tender. She was admitted into Warrington Lodge in May. Her uterus was not so tender, but the right oviduct was tender and enlarged, as also were the left ovary and oviduct.

Operation.—On May 15: The right oviduct was found enlarged, thick, and hard, and adherent to the ovary; they were both removed. The left oviduct was in a similar condition, and its extremity, enlarged to the size of an orange, was lying in Douglas's pouch and adherent there. The ovary was enlarged and cystic, and was removed with the tube. On each side there was a transparent parovarian cyst the size of a bantam's egg. The lumen of each oviduct was found on incision to be blocked with dense inflammatory deposit. The right ovary contained a large corpus luteum. The end of the left oviduct and ovary were converted into a large abscess full of pus, but it was removed unruptured. The patient made a good recovery.

Dr. MACNAUGHTON-JONES showed a specimen of cirrhosis of the ovary and a degenerating uterine myoma, removed from a patient approaching the menopause,

remarking that the ovary was a typical specimen, and exemplified what he always maintained, that the clinical symptoms in many cases of ovarian disease were altogether out of proportion to the physical conditions found on examination. In this particular case the woman had been a confirmed invalid for five years, suffering constant pain, with inability to walk. He had removed one ovary and resected the other.

The PRESIDENT, in reply to Dr. Snow, said there were no adhesions round the ovaries. There was no doubt that, as Dr. Macnaughton-Jones remarked, the clinical symptoms in ovarian sclerosis were very much out of proportion to what might be expected from the size of the ovaries, but they could hardly be said to be out of proportion to the disease, which was, he must insist, much more serious than it was generally esteemed to be.

Dr. MACNAUGHTON-JONES, for Dr. J. R. Cook, of Fairmont, Virginia, a Fellow of the Society, exhibited a beak-shaped peritoneal knife devised for cases in which, owing to adhesions, there was some danger of injuring the bowel. He had tried it, and found that it slipped up readily under the peritoneum, and in adherent cases would afford protection.

ISOLATED DUCT CANCER IN THE AXILLA.

Dr. MACNAUGHTON-JONES also exhibited a specimen from a patient, aged 47, operated upon for a tumour, which proved to be a large encapsuled gland completely and deeply imbedded in the axillary adipose tissue, no other glands being involved, and the mamma itself, which was very large (weighing 3 lb. 4 oz. on removal) presenting no symptoms whatever of malignancy. The *only* clinical sign was that this breast had been for years somewhat heavier than the other. The breast, together with all the cicatricial tissue resulting from the previous operation, was amputated seventeen days after the axillary growth was removed, and though search was made in various parts

of the breast for any evidence of malignancy, up to the present none had been detected. The carcinomatous gland was absolutely isolated, surrounded by adipose tissue, and widely removed from the gland tissue of the mamma.

Dr. MACNAUGHTON-JONES also read notes of the following cases :—

CASE 1.—THIRD CÆLIOTOMY ON THE SAME PATIENT—
HYSTERECTOMY FOR UTERINE HÆMORRHAGE.

The patient, when first operated upon in December, 1901, was 26 years of age, and had been recently married. She had an ovarian cyst of the left ovary. Oöphorectomy was performed, the left adnexa removed, and the right ovary resected. The incessant vomiting from which she had been suffering ceased immediately after the operation. In September, 1902, a large cyst was then found in the broad ligament, the right ovary had to be removed, and was taken away with the adnexa. A few months afterwards the hæmorrhage from the uterus recurred, and, as it continued, the cavity was freely curetted, and the curettings were found to consist of thickened endometrium with hypertrophied gland tubules, as in adenomatous endometritis. There was no evidence of malignancy. In July, 1903, as the hæmorrhage still persisted, and the patient's life was in serious danger, hysterectomy was performed, when another cyst was found in the right broad ligament. The adnexa and the cyst previously removed show that the oöphorectomy had been most complete. Since the operation the patient has regained health and strength.

CASE 2.—EXTENSIVE CELLULITIS AFTER CONVALESCENCE
FROM HYSTERECTOMY FOR MYOMA.

A multiple myoma was removed from a patient, aged 55, the urgent symptoms being recurrent attacks of peritonitis with incontinence of urine and repeated hæmor-

rhage. There was nothing unusual about the operation, and the convalescence—as shown by the chart—was exceptionally good; but on the twentieth day after the operation the temperature suddenly rose without any apparent cause, and, the pyrexia associated with rapidity of the pulse, denoting some septic condition, continued for the following fourteen days. During this time daily examination disclosed nothing except some tenderness and dulness in the right iliac region. The uterine stump was sensitive to pressure, and gradually became fixed. After some days shreds of necrotic tissue, varying in quantity, were passed with the douche. Symptoms of peritonitis were absent. No sign of fluctuation could be detected anywhere, and examination by the rectum proved that there was no accumulation in Douglas's pouch. The symptoms persisted until the twelfth day, when the temperature and pulse both fell, and she appeared to be getting better. But on the night of the thirteenth day there was a relapse, the pulse rose to 140, the respirations became rapid, and a hard effusion made its appearance, and rapidly extended upwards, so that on the morning of the fifteenth day its upper margin was only a few inches below the umbilicus. Her condition was then extremely bad. On that afternoon an incision was made from the crest of the ileum to the pubes, and the surface of the dense exudation was exposed without injury to the peritoneum. An aspirating needle disclosed nothing, so an incision, corresponding to the outer wound, was made through the exudation to the depth of some eight inches. The finger, exploring this, discovered a dense slough, and a small quantity of pus—which had no fœtor—escaped. The cavity was thoroughly cleansed, mopped out with formalin solution, and a drainage tube surrounded by iodoform gauze was passed to the bottom of the wound. A few hours after the operation her pulse was 156, and the respirations 30; she nevertheless rallied, convalesced, and is now completely recovered.

Dr. J. MANSELL-MOULLIN said that the only trouble he had had this year in a very large number of hysterectomies was much of the same nature as that just narrated ; the symptoms commenced a fortnight after the operation, and in the course of a week the uterus had become fixed, and the effusion had increased on the left side till it offered a definite resistance, and he had to reopen the abdomen, which he did through the old incision. He found a collection of pus, small in relation to the amount of effusion, right down behind the uterus. This pus might have been reached by an incision in the vaginal vault, but that would have been working in the dark, and he felt it safer to re-open the abdomen.

Dr. HERBERT SNOW said that with regard to scirrhus carcinoma developing in the axilla, a recondite explanation had been offered that it might be owing to the presence there of a supernumerary gland or island of mammary parenchyma, independent of the true mamma ; he thought that explanation far-fetched, and that cases like the one narrated were open to a more simple solution. There was nearly always prolonged over the edge of the pectoralis major into the axilla, a layer of gland tissue in which carcinoma sometimes developed and appeared to be quite isolated from the breast proper. Such cancers, of course, rapidly infected the glands, and if not removed early became adherent to the vessels, entailing in their excision the removal of a portion of the axillary vein.

Dr. C. H. F. ROUTH complimented Dr. Macnaughton-Jones on the successful result of the course he had adopted. In many cases, with sudden high temperature without apparent reason, the cause lay in the presence of some deep-seated inflammation which had not been detected, and courageous treatment would often save life. He narrated personal and other observations illustrating this.

Mr. SKENE KEITH said the peritoneal knife exhibited was no doubt clever, but he deprecated the tendency to complicated tools ; with the scissors and bistoury one

could do all that could be required. In closing the abdominal wound he adhered to the old plan, with the single modification that he included merely the edge of the peritoneum. It was hazardous to assert that hernia was not met with after any method; he had known one occur as late as seventeen years after the operation. With regard to the case of cellulitis, when the peritoneum was stitched over the stump and unsatisfactory symptoms supervened, it had been suggested to pass a sound up the cervix as far as it would go with ease, and in this way perhaps liberate a little fluid.

Dr. F. A. PURCELL said that in supra-vaginal hysterectomy, between the remnant of the cervix and the sutured seam of peritoneum a pouch was left extending across the pelvis, and this pouch was the source of danger. Fortunately pus, when it did form there, often discharged itself through the cervical canal and the patient recovered. Drainage through the remaining os was the proper treatment.

The PRESIDENT explained that he did not make flaps, as supposed by Mr. Jessett, but merely passed sutures horizontally through the cervix after its division, in order to bring the edges together and lessen the strain on the peritoneum. The accumulation of pus on the stump alluded to by Mr. Skene Keith had been particularly described by Dr. Milton, of Cairo, who seemed to think that it was the regular thing in sub-peritoneal hysterectomy for the patient to have a rigor from that cause. He had seen such a thing happen and the pus find its way through the cervix without giving rise to much disturbance.

Dr. MACNAUGHTON-JONES, in reply, said that the axillary tumour was not situated in any adventitious or supernumerary mammary tissue or gland. It was quite three inches away, isolated and imbedded in the axilla. Microscopical section showed the similarity between the duct cancer in it and that found in the mammary gland itself.

Further examination was being made of the mamma, and he would make a further report on the small myoma which he had shown. It was a verification of his position that the question of hysterectomy had to be determined from the symptoms, rather than from the size, of the tumour. The great advantage of the incision made in the case of cellulitis, was that the abscess was reached without injury to the peritoneum, a point of the greatest moment. It was, in his opinion, in such a case, far better than opening in the middle line. In the case of the adenomatous uterus which he had removed after the previous coeliotomies for ovarian disease, there was the interesting feature of recurrence of cystic degeneration in the same broad ligament. The adnexa had been completely removed in the previous operations. The hæmorrhage was undoubtedly due to adenomatous change in the uterine endometrium.

NOTES ON A CASE OF MULTIPLE DEGENERATING FIBROIDS
AFTER THE MENOPAUSE. By BEDFORD FENWICK,
M.D., Physician to the Hospital for Women, Soho.

This specimen is a uterus filled with submucous fibroid growths, which I removed last Tuesday at the Hospital for Women. The patient's age is 54, she has had four children—the last being born fourteen years ago. Her menstrual history and her pregnancies were completely normal. The menopause occurred seven years ago. For the last four years she has had irregular and at times profuse and prolonged losses of blood, which medicines failed to check. Some two years ago she came under the care of Dr. Galbraith, of Southgate Road, who found a polypoid growth projecting from the cervix and removed it. She was much better for a time, and then the losses recurred. Another hard, almost calcareous, growth showed itself and was removed, and she was again better for a time. On several occasions since the same losses have occurred, relieved by the removal of other growths. Lately, however, the losses have become more profuse, the patient

has lost flesh and strength somewhat rapidly, and the last growth removed by Dr. Galbraith resembled a piece of orange. In the last month the discharge has become very offensive, thicker and darker in colour. At Dr. Galbraith's request I took her into the Hospital for Women, and on examination found a soft friable mass just inside the cervix which seemed part and parcel of the growth. The uterus, however, was somewhat enlarged, and felt hard and nodular. She had a temperature of 102° , and a quick, fluttering pulse of 110. From this and the history I diagnosed a sloughing intrauterine fibroid, but confess that the growth felt to the finger exactly like one of a malignant character. The specimen shows the manner in which these small fibroids are shelled out from the muscular wall into the cavity; how the compression upon their surface causes necrosis and sloughing; how very difficult for the practitioner and how disheartening for the patient, it is to treat these cases by piecemeal extraction; how much more satisfactory is the radical treatment by hysterectomy. Two other practical points of importance in this case deserve some notice. First, that it exemplifies very well the growth of uterine fibroids after the menopause has taken place, quite contrary to the old-fashioned doctrine, which apparently is still believed by some, that the cessation of the catamenia inevitably brings about a shrinking in the growth of any uterine fibroid which may be present. This doctrine, I venture to believe, is not only entirely fallacious, but is the cause of much needless suffering and danger, or, at the least, grievous disappointment, to many women who patiently wait, year after year, for the menopause to put an end to their uterine symptoms, only to find then that these symptoms become intensified rather than diminished.

In the second place, this case is interesting because of the manner in which this condition so often simulates that of malignant disease, and which, in my experience,

has not infrequently led to a diagnosis crushing in its hopelessness to the patient and her friends, but happily disproved by her complete recovery after hysterectomy has been performed. It was certainly fortunate for this particular patient that her doctor had so carefully watched her progress and so promptly sent her into the hospital so soon as septic symptoms showed themselves.

Dr. BEDFORD FENWICK said he had removed this uterus supra-vaginally, but as low down as possible so as to escape the slough, and had disinfected the remnant of the canal with iodised phenol. In several instances in which he had not taken this precaution, symptoms of cellulitis had followed, and it had then been his practice to pull down and dilate the cervix and scrape the stump, and this had always been successful. He dissented from Mr. Jessett's view that one should not close the stump, and he always cut out a wedge of tissue so that the cervix could be drawn together by deep catgut sutures, a neat stump left, and the peritoneal flap protected from the burrowing of pus from below.

Dr. MACNAUGHTON-JONES said that he always prepared the uterine stump and united the flaps with gut sutures, covering the entire stump with peritoneum. In cases which had not been curetted, he first disinfected the uterine canal for a short distance. This was done in the case of cellulitis he had described.

Mr. JESSETT thought that suturing the cervical stump was a proceeding that it was better to omit, as it interfered with drainage through the cervical canal into the vagina, to the want of which he thought the symptoms of infection described by Dr. Macnaughton-Jones might be due.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF HÆMATOCELE.

By Professor PAUL ZWEIFEL.

Director of the University Frauenklinik in Leipzig; Honorary Fellow of the British Gynæcological Society.

AN ADDRESS TO THE LEIPSIK MEDICAL SOCIETY ON JUNE 23, 1903.

I HAVE here a specimen of tubal gestation, removed by operation fourteen days ago. At one spot the point of a small tuft of chorionic villi protrudes through the peritoneal investment of the tube, and the opening it has made, though not larger than the head of a knitting needle, nevertheless led to terrible and almost fatal hæmorrhage into the abdominal cavity.

This specimen is the more instructive as it shows that the rupture of the tube is not by any means always delayed till the third or fourth month; as—in connection with the old theory of its distension by the ovum—was formerly supposed, for the ovum was manifestly quite a young one, and the history of the case shows that in this patient the catamenia had been missed only once, and that the hæmorrhage took place eight days after the omission, that is to say, only five weeks after the last menstruation.

This ovum, not larger than a hazel nut, cannot have ruptured the tube by distension, and as it had reached the serosa and grown through it into the abdominal cavity, it must have done so by an active process. Various instances of the kind have been recorded; in our own klinik several cases have been operated upon in which the placenta had

undoubtedly grown through the wall of the tube and even through the peritoneum. The true explanation that in tubal gestation the ovum almost invariably eats its way into the tubal musculosa, first discovered by Fueth¹ from the investigation of an ovum in the Frauenklinik at Kiel, has been established as a fact by the researches of Aschoff,² Kuehne and many others. The mucous membrane of the oviduct contains so little connective tissue that the ovum, which in the human being seems in every instance to bore its way into a mucous surface, when arrested in the tube soon comes to lie, not merely within the mucosa, but between the muscular layers; excavating the wall of the tube in this way it reaches the under side of the serosa, and under some circumstances this membrane, either owing to some slight mechanical cause, then gives way, or, in other cases, without any external cause, is penetrated by the erosion of the chorionic villi. Whether the hæmorrhage that follows is moderate and the blood soon encapsuled by clotting, or whether it pours into the peritoneal cavity to such an extent as to endanger life, is a mere chance. Encapsulation leads to the recognised syndromata of an accumulation of blood in the pouch of Douglas, a form of retro-uterine hæmatocele that is now accepted as invariably a consequence of tubal gestation. But thirty years ago, though they recognised that in a very large proportion of cases hæmatocele was a result of extra-uterine pregnancy, gynæcologists generally held the opinion that under morbid influences, such as a severe chill during the period, even the blood discharged in menstruation might lead to the formation of a hæmatocele, and the ideas as to the influence of a chill were so deeply rooted, that no offence was taken at the diagnosis of a hæmatocele in a virgin. We have to thank J. Veit for being the first to point out that the cause of a blood tumour in the small pelvis was an antecedent to ectopic pregnancy much more frequently than had been supposed. Nowadays extra-uterine pregnancy is accepted not merely as the most frequent, but almost as the only cause of an hæmatocele.

No one will deny that it is possible for blood tumours in the small pelvis to arise from other causes, nor that instances of such have been observed, but one must not fall into the mistake of describing every accumulation of bloody fluid in Douglas' pouch as a hæmatocele, nor into that of claiming every instance in which neither embryo nor placenta can be seen with the naked eye, as a proof against pregnancy. The theory that hæmatocele is, as a rule, consequent upon ectopic gestation is founded on microscopical examinations of the tubes, or upon the discovery of embryos, and if any author who now asserts that he has met with a blood tumour of the small pelvis which cannot be attributed to a tubal, or ovarian, pregnancy, is bound to furnish ample proof of the same kind, it will soon appear that hæmatocele of other origin is quite exceptional.

There was an inclination to refer large hæmatocèles to the rupture of tubal pregnancies, and to describe small blood tumours as "catamenial," until Werth, from examination of two cases in which the tube, quite intact and therefore unruptured, simulated a blood tumour in Douglas' pouch, put forward the view that a partial or complete detachment of the ovum, that is to say an abortion, might happen in tubal just as in intrauterine pregnancy, and so lead to the formation of a small hæmatocele.

As this view became established by numerous observations, it became customary to diagnose any hæmatocele which occurred in the first few weeks after the omission of the menstrual discharge as due to a tubal abortion, and to refer to rupture only those catastrophies which happened later, in or after the third month, since in the earlier period there did not seem to be any sufficient cause for the tube wall to give way.

But more recent researches show that in the process of embedding itself in the tube the ovum eats through the tubal mucosa, and that the view just mentioned is untenable; for at any time, even within a few weeks of the omis-

sion of menstruation the serous investment of the tube may be penetrated, hæmorrhage take place, and, if the blood be then freely poured into the peritoneal cavity, a large effusion may form rapidly, or if happily the peritoneum at the perforation chance to be poor in its blood supply, encapsulation may soon follow. Moreover, the capsule of the ovum may give way first in the tube, blood may pour through the abdominal ostium, and a tumour be formed in Douglas' pouch, yet the ovum may continue to grow and afterwards eat through the tube wall in another place.

These facts offer a direct explanation of those cases in which, after the first hæmorrhage has ceased and after the blood has become encapsuled, a second catastrophe occurs such as used to be referred to the rupture and explosion of the hæmatocele into the free abdominal cavity. That this old explanation is untenable is absolutely proved by a case of my own in which, at the operation on a woman who had been under expectative treatment in the klinik for hæmatocele for fourteen days, fresh blood was found free in the peritoneal cavity perfectly distinct from the old black blood of the hæmatocele, and it was evident that a recent hæmorrhage must have taken place.

I may instance also two cases which were admitted into the klinik on the same day, completely exsanguined, but with well-defined retrouterine hæmatocele; the operations gave absolute proof that the recent and almost fatal hæmorrhage into the peritoneal cavity had happened on the top of existing encapsuled collections of blood. One of these women had lost so much blood that during the operation neither pulse nor respiration was perceptible, and we had to close the abdomen rapidly, induce artificial respiration, and inject salt solution and camphor hypodermically before we could proceed.'

As in the title to my address I have promised to give prominence to the essentially practical points of view, I must not wander from the question, but let me briefly state the conclusions to be drawn from the facts I have laid before you.

When a pregnant woman is attacked with symptoms of peritonitis, that is to say, great pain in the hypogastrium, swooning, collapse, vomiting, decreasing volume of the pulse, if there be no fever, one must at once suspect an erosion of a gravid tube, and in view of the great danger of inaction and the excellent prospects of early operation, accept immediate operation as absolutely necessary.

This is the standpoint taken now by nearly all gynæcologists, and I believe that any contradiction of this principle is silenced or will not be listened to should any attempt be made to raise it. At the Congress of German Gynæcologists at Halle in 1888, in the course of an interesting discussion as to the most appropriate treatment of extra-uterine pregnancy, Schwarz, the first speaker, characterised electro-puncture, puncture with injection of morphia, and similar purely expectative procedures as treatment bordering upon dilettantism. Although his statement was opposed by von Winckel he was not unsupported, and time has since done him justice. Cases with acute and free hæmorrhage into the peritoneal cavity are uniformly fatal unless operated upon early enough—at all events, before the pulse has become imperceptible—while the patients who still breathe when taken from the operating table, as a rule, recover.

The operation may be called an easy one; the bleeding tube has merely to be quickly found and clamped so as to arrest the hæmorrhage. We begin with hypodermic infusion of salt solution during the administration of the anæsthetic, and when the patient is anæsthetised ligature the tube and remove every drop of blood from the peritoneal cavity. In order to be sure of taking away any blood effused into the hollow of the diaphragm with as little irritation of the intestines as possible, we have no hesitation in elevating the insensible patient, so that the blood may flow down into Douglas' pouch, out of which it can be mopped away without difficulty.

Though in regard to opening the abdomen and the

direct control of the hæmorrhage gynaecologists are generally agreed, they are not so upon the question as to how the blood effused into the peritoneal cavity should be dealt with. At the Halle Congress just mentioned, while J. Veit and A. Martin would not hear of removing any of it, but expected the patient to benefit from its absorption, Schwarz held that its complete removal was indispensable. I had already advocated the principle of complete removal, inasmuch as I looked upon the effused blood as resembling a cask of powder, only wanting a spark to explode it. In my opinion to allow blood to remain in the peritoneal cavity is to leave a material available as a cultivating medium for the germs of putrefaction, and shows a foolhardy confidence in asepsis. True, the blood does not invariably putrefy but sometimes remains aseptic, as is proved by the cases that do well; but, interesting as it would be to have the information, we have nothing to show how often leaving the blood behind has been followed by good results.

It is much to be regretted that the partisans of "auto-transfusion," as this treatment has been called, do not give the same publicity to their experiences, whether they are good or bad, for the aim of science is to discover the truest and best, not merely to stick to what is right, and never make a mistake. It is a too common occurrence for practitioners confiding in the authors referred to to leave the blood in the peritoneal cavity in such cases, and for their patients to pay for this treatment with their lives; the mistake once made is never retrieved.

If the evacuation of the blood be attempted at all every drop must be removed, for it is self-evident that the putrefactive germs of the atmosphere are far more likely to reach the abdominal cavity during the process of mopping out the blood, than they would be if the cavity were promptly closed.

Since the year 1890, fourteen cases of recently ruptured tubal gestation with profuse hæmorrhage into the peri-

toneal cavity, endangering the patient's life, have been operated upon in the Leipsic Frauenklinik in the way I have recommended, and all of them recovered, though in several the pulse in the radial artery was imperceptible during the operation. Four other women were admitted who died during their transport and before their arrival in the operating room.

Among the fourteen acute cases, there were four in which an encapsuled hæmatocele existed before the onset of hæmorrhage which nearly proved fatal.

I am not aware whether there are still any physicians who hold that, in case of acute free hæmorrhage into the abdominal cavity, one should take the chance of leaving it to stop of itself, but it is certain that there used to be such, and that, no doubt, from dread of laparotomy. I have no wish to deny that cases occur in which it is very difficult to decide, but the responsibility for delay and opposition has become heavier on account of the comparative safety of laparotomy.

The young wife of a medical man was attacked, in an inn in Leipsic, during her honeymoon, with serious symptoms of internal hæmorrhage; the physician who was summoned made a correct diagnosis, and used all his powers of persuasion to urge an immediate operation but in vain, as the young bridegroom could not bring himself to consent to his wife undergoing such an operation, desired to telegraph to her parents beforehand, and made other objections of the kind. He withheld his consent, but two hours later, as she had evidently grown worse, brought her almost bloodless to the klinik, and she died in the operation room before anything could be done.

Such cases, and the reproaches they justify, should be remembered by those authors who go on reporting instances of recovery from the point of death, and advocate non-interference, clinging to their experiences as affording a gleam of hope to justify their opposition to operation. To such we must insist upon the cases in which

delay has cost dear, and death has too soon proved the unsoundness of their counsel.

In internal bleeding the indication to open the abdomen at once, arrest the hæmorrhage and remove all the effused blood, is, of course, not merely valid in case of primary rupture or erosion of the tube, but is equally stringent in secondary hæmorrhage.

At the Halle Congress already referred to, Schwarz related a case in which a hæmatocele had existed for eight days, when a fresh hæmorrhage took place so suddenly at night that, although she was in the klinik, the woman died before laparotomy could be performed. This unfortunate result, which Schwarz set down to rupture of the capsule of the hæmatocele, we should attribute to secondary erosion of the tube, and the four cases we had during the last four years also suggest that in the prognosis with regard to a hæmatocele such an occurrence must be taken into account.

These observations lead me to allude to an article by Thorn, of Magdeburg,³ which appeared a few weeks ago. In it he maintained the old standpoint and recommended that the treatment of retrouterine hæmatocele should always be expectant, except in cases of suppuration. He declared that the researches of Fueth, Aschoff and others, were no ground for altering this opinion, because secondary erosions of tubal vessels were altogether too rare. Now, as I have already pointed out, among fourteen cases of free hæmorrhage into the abdominal cavity during the last four years, four were undoubtedly due to secondary erosion of the tube. It may be objected that two of these cases occurred on the same day, and that such a remarkable accident proves nothing in regard to general practice. Certainly the occurrence of two of these cases on the same day was an accident, but it is a common experience in medicine that, if the attention of the physician is drawn to a particular occurrence, more cases of the same kind are soon met with. Of this, hæmatocele offers

a striking example : ectopic gestation as an antecedent cause of hæmatocele was formerly esteemed to be exceptional, but has been now shown to be so frequently so that one might suppose that during the last thirty years extrauterine pregnancy had become much more common. This is not the case, at all events there is no evidence to show that it is : but the diagnosis is so improved that it is no longer the rule for ectopic pregnancy to be falsely interpreted. So it may be that secondary erosions of the tube are much more common than was formerly supposed, and I will remind you by and by that I have circumstantial evidence that this is the case.

The question, How often a hæmatocele may lead to secondary hæmorrhage ? is one that it is difficult even now to give even an approximate answer to from the cases formerly recorded. Recurrent hæmorrhage, sudden deterioration, and fresh attacks of swooning, are frequently mentioned, but few cases were fatal, and without an autopsy they escaped recognition. Fresh evidence must be collected.

In my own service, among rather over 100 cases in four years (94 in exactly three and a half years), there were four instances of secondary erosion of the tube. In the treatment of hæmatocele, therefore, it is certainly necessary to take into consideration the possibility of such secondary hæmorrhage. When a hæmatocele is once formed care should be taken, for at least two or three weeks at all events, that in case of any sudden deterioration in the patient's condition we may be able to help her by operation. In the klinik we can let the patient rest, and we can wait, because help can be given at any time on the occurrence of bad symptoms. In private practice the danger must be taken into account, and the patient and her relations must be warned of the possibility of a prompt interference being necessary.

Having now discussed the two indications which, from their great danger, demand immediate intervention I turn to the question as to how encapsuled hæmatocele is generally to be treated. *The fundamental principle is expecta-*

tion. This I have always held, and never, even after it became evident that the primary cause was, much more frequently than had been supposed, an ectopic pregnancy, advocated the proposal that operation should be the invariable, or even general, rule. I have always insisted that operation was not demanded except by putrefaction of the blood, persistent pain, or exceptional size of the blood tumour; and further that intervention should, if possible, be deferred till after the formation of a firm capsule. Even with these limitations the occasions to operate are common enough.

Of the methods, the first to be considered is elytrotomy, or, as it is now called, posterior colpotomy. This consists in opening, layer by layer, the posterior vaginal vault and pouch of Douglas, evacuating the clotted blood by breaking it up with two fingers, washing away any remaining clots, and, finally, after drying it out, plugging the cavity with iodoform gauze. This operation is so simple that it may be performed without anæsthesia, as I have done it even in private practice. But care must be taken that in evacuating the blood the capsule is not broken, and that no blood masses are left round the ovum in the tube, for, after opening from below, such masses always decompose, and, unless the drainage is absolutely free, the decomposition leads to fever and sepsis.

If all goes well, posterior elytrotomy is without danger and in a fortnight the patient is well enough to get up. When such blood masses as I have alluded to remain in the tube, I prefer, for sake of safety and uninterrupted healing, to complete the intervention by an immediate laparotomy, and, removing all the blood from above, to fill the sac with iodoform gauze and shut it off entirely from the peritoneal cavity. I cannot deny that in many instances I have been obliged to do one thing when I intended to do another. But half measures are certainly much more dangerous than completed work.

When a hæmatocele has suppurated it must unques-

tionably be dealt with from below, and the incision must be as wide, and the primary evacuation as complete, as possible, since the blood is not, like pus, able to make way for itself, but remains where it is, putrefies, and by its resorption causes fever and sepsis. In more than one instance the course of suppurated hæmatocele in our klinik has been extremely unfortunate.

The size of the tumour which may be taken in itself to indicate an operation, is when the effusion of blood reaches above the brim of the pelvis and is therefore considerably larger than a child's head, and for its absorption would require weeks or even months.

v. Scanzoni has collected the cases of hæmatocele treated in the Leipsic Frauenklinik during the ten years, 1890 to 1899 inclusive; they were in all 211 cases, and in the three and a half years from January, 1900, to June, 1903, we have had 94 more.

v. Scanzoni investigated 107 cases thoroughly as to their permanent results; 57 per cent. were treated expectantly without any death. Two women underwent laparotomy at other hands, after their discharge; presumably they were not satisfied with our treatment as they did not come back to us. Elytrotomy was performed 27 times with two deaths, one owing to an unfortunate accident, inasmuch as the irrigating tube was pushed through the sac of the hæmatocele into the abdominal cavity, and peritonitis supervened; the other fatal case was that of a woman who on admission was in high fever with symptoms of the ileus from which she died.

Of the 40 cases of laparotomy which were reviewed by v. Scanzoni,⁴ 3 died, one from purulent peritonitis and intestinal tuberculosis, another had been admitted in a condition of extreme collapse with signs of profuse internal hæmorrhage and died half an hour after operation, and the third succumbed to peritonitis following the rupture of a suppurating hæmatocele before her admission into the institution.

An extremely interesting fact appears from v. Scanzoni's researches, viz., that the women subjected to expectant treatment got off surprisingly well in regard to the condition of their genitalia and subsequent conception, that is to say, that in the majority of cases after the resorption of the blood there was a more perfect restoration of the tube than would have been expected from the appearances found in the laparotomies, when both tubes were generally found occluded, with some blood in each; even the one which was not occupied by the ovum nevertheless contained effused blood.

It is also noteworthy that while, in regard to rapidity and completeness of their convalescence, the patients submitted to elytrotomy did as well as those treated expectantly, those who underwent laparotomy recovered more slowly and imperfectly and one of them was never fit for work. This last case requires some explanation, for in the operation itself there seems to be nothing to account for laparotomy causing permanent inability to work; I hope to learn more about this patient.

Altogether in the 211 cases treated from 1890 to 1899, conservative measures were employed in 53·55 per cent.

The statistics of the last three and a half years offer more definite conclusions on the frequency and prognosis of the different methods of treatment. In the 94 cases there were 9 of erosion of the tube, 4 of them being secondary; 43 patients (45·6 per cent.) were treated expectantly, 18 by elytrotomy (20 per cent.) and 33 by secondary laparotomy, and in every one of these 33 it appeared that the peritoneal cavity had been previously opened from below and that blood or irrigation fluid had found its way into it. Only one of the 94 patients died, and she was not operated on but, moribund on admission, breathed her last on the way from the door of the klinik to the operating room. Every case operated upon was completely cured.

I quite admit that the researches made by v. Scanzoni were not without influence and that, in face of the unex-

pectedly favourable results of expectant treatment, I made greater efforts to adhere to that treatment in every case where it was at all possible to do so, for in every instance in which one begins the evacuation of Douglas' pouch, it depends on accidental circumstances whether one is able to confine oneself to that proceeding or not. On the other hand we are often hampered by having sent to us patients with large hæmatoceles, who have already been under treatment in private practice for weeks, and who on attempting to get about have had a return of their bad symptoms; such women are so worn out by severe pain and by the long duration of their illness that when admitted into the klinik they generally desire most earnestly that something should be done.

The nature and prospect of her case is frankly and explicitly laid before each patient and she is expressly told that she can be cured without operation though in a longer time, and that such operation is only suggested either to shorten the time of treatment or to relieve pain; and any woman that prefers it is given expectant treatment as long as no vital indication against it occurs.

It must be added that most of our patients come from the poorer classes, to whom it is a great hardship to lie many weeks in bed; who are compelled to do their house work and so bring back their pains. One can well understand the longing of such people, for whom the struggle for existence is a hard one, to get well, especially when it is understood that they can be safely and quickly cured.

If means could be devised to accelerate resorption so that they might get well in about two or three weeks, that would be a much better way out of the difficulty. In many cases the absorption of the blood is astonishingly quick, while in others it is terribly slow; rapid absorption probably depends upon all the blood being poured into the abdominal cavity and on the tube containing no clots, no tubal mole. But we cannot influence this condition in any way.

My colleagues will naturally want to know how they can hasten resorption in the cases remaining under their care. The treatment is called expectant and, to be honest, one must confess that in it little is left to the doctor and that Nature does all. *Natura sanat medicus curat*. Painting with iodine has been recommended, but, though we employ it, we have more confidence in hydrotherapy and quiet rest in bed. If the sufferers lose patience and get up they generally have renewed attacks of pain. In no case do we prescribe alteratives; pain and obstipation are treated symptomatically.

I may in conclusion point out that among the 94 cases treated since January, 1900, nine, nearly 10 per cent., were ruptured pregnancies compared with only 5 per cent. in the earlier series. This shows an improvement in diagnosis; extrauterine pregnancy is now more often detected in its earlier stages and the patients sent to the klinik in time to be operated on.

The difference between Thorn's opinion and my own upon the indications for treatment is not a wide one; he, the advocate of conservative measures, treated 65 per cent. (139:215) expectantly; I, the alleged advocate of interference, from 1890 to 1899 treated 53 per cent., and from 1900, 45 per cent., expectantly. There has, therefore, been as little on my side an abuse of the principle of interference as on Thorn's of conservatism; there is no fundamental difference in our treatment. It is simply in regard to secondary erosions that I insist on the necessity for operation, for I have had several dangerous cases of the kind. In any case the satisfactory results have vindicated the principles of the treatment adopted.

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HERMAPHRODISM IN THE DAILY PRACTICE OF MEDICINE ;
BEING INFORMATION UPON HERMAPHRODISM INDISPENSABLE TO THE PRACTITIONER.

By Dr. med. FRANZ VON NEUGEBAUER.

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&c., &c.*

IN view of the grave consequences of an erroneous determination of sex, and the frequency of such mistakes in ordinary practice, it seems desirable to glance at the cases of this anomaly in the human being recorded in contemporaneous literature, in order to ascertain the circumstances under which a medical man may have to deal with an hermaphrodite, the various questions that may need solution in various cases, and the precautions that should be taken to avoid the risk of serious mistakes.

In the course of the last few years I have been able to collect no less than 930 observations of hermaphrodisim in human beings ; 38 of these were cases which had come under my own observation, and the rest I found dispersed in ancient and modern literature. This collection contains a great number of surprising facts, in regard to diagnosis and therapeutics, and is full of information for all who practise medicine.

The genital organs of the human foetus consist of glands and canals ; but while the foetal organisation of the canals is always bisexual, every embryo possessing the two ducts of Wolff as well as the two ducts of Mueller, the organisation of the glands is, in the earlier stage of evolution indifferent, later monosexual. Although theoretically we must admit the possibility that a foetus might have two

testicles and two ovaries, or one testicle and two ovaries, or two testicles and one ovary, or one testicle and one ovary, that is to say, that it might really be a true hermaphrodite, and though there have been plenty of cases in which it has been alleged that testicular tissue has been found in one or two genital glands and in the same individual, ovarian tissue also in one or two other genital glands, up to the present time not a single one of these observations has stood the test of microscopic examination of the anatomical specimens; even in the one observed by Heppner, Slaviansky was quite unable to discover any Graafian follicles in the supposed ovaries. The supposed ovotestis of Blacker and Lawrence, a genital gland in which these authors believed they had found a mixed histological structure, testicular and ovarian, did not resist microscopical examination by Nagele. A true ovotestis has been proved microscopically in two instances only, reported respectively by Salén and Garré.¹

As yet, therefore, no one has ever found testicle and ovary in the same individual and, still less, has the essential postulate of the hermaphroditism ever been realised, namely, that the same individual should be capable of coition as a male and of becoming pregnant, save in the fables and myths of antiquity and the middle ages. One may therefore abandon once for all the ancient classification of hermaphroditism as lateral, unilateral and bilateral, since the condition is merely one of pseudo-hermaphroditism, an apparent hermaphroditism in which the genital canals, the external genital organs, and the secondary sexual characteristics do not completely correspond with the sexual character of the genital glands, but are developed after the contrary type, heterologous instead of homologous; in which the masculine and feminine genital canals, the ducts of Wolff and those of Mueller, have

¹ See also Simon's case (BRITISH GYNÆCOLOGICAL JOURNAL, 1903, August, p. 106, and for Saléns *infra* Summary).

developed simultaneously, while the external genital organs and the secondary sexual characteristics bear the appearance of one sex or the other, and appear to be either masculine or feminine.

But when there is simultaneous development of the ducts of Wolff and those of Mueller in an individual with testes, or one with ovaries, such development rarely attains the same degree in both; but generally a *majus* in the development of Wolff's ducts coincides with a *minus* in Mueller's, and *vice versâ*, that is to say, an excess in one pair of ducts and a deficiency in the other.

The development of the genital glands is very often arrested in such a rudimentary stage, that one can find nothing in them but fibrous tissue and blood-vessels, and even microscopic examination is quite insufficient to determine whether the specimen corresponds to a rudimentary testicle or to an ovary of arrested development. A testicle, the development of which has been arrested, to the naked eye often resembles an ovary.

Even a very minute histological examination of a genital gland, either removed by the surgeon's knife or obtained from the cadaver, is often insufficient to determine the question of doubtful sex, it is therefore easy to understand that the practitioner, whether a surgeon, obstetrician, or gynæcologist, should still more frequently abstain from giving a precise diagnosis in a case of doubtful sex, especially in the case of a new-born child.

According to Waldeyer, the primitive organisation of the genital organs of the human embryo is bi-sexual; according to Benda it is feminine, the masculine type being merely a modification of the feminine by progressive development.

Siegenbeck von Heukelom suggested a novel classification of hermaphroditism; he wished to distinguish *glandular* hermaphroditism, in which the individual was provided with genital glands of both the masculine and feminine type (a

form of hermaphroditism that we have said has never been as yet found in human beings), from tubular hermaphroditism, in which there has been either a simultaneous development of the ducts of Wolff and of those of Mueller, or else merely the development of the ducts heterologous to the existing glands, that is to say, of Mueller's ducts, where testicles are present, or of the Wolffian ducts along with ovaries. According to this classification, the external genital organs in tubular hermaphroditism might be developed after either the masculine or feminine type, the latter representing merely an arrest in the development of the former.

But for practical reasons it is convenient to adhere to the classification Klebs has made of apparent or pseudo-hermaphroditism, the only form we shall have to consider.

PSEUDOHERMAPHRODITISM — I. *Feminine* : Gynandroid, Gynander, Virago (Benda suggests pseudo-arrheny for male traits in a woman). II. *Masculine* : Androgynoid (Benda suggests pseudo-thely for feminine traits in a man). In each of these categories there are three varieties : (a) internal, (b) external and (c) complete.

I. *Feminine Pseudohermaphroditism*.—(a) Internal : External genital organs feminine ; *simultaneous development of the ducts of Wolff and those of Mueller*, but to different degrees. (b) External : External genital organs apparently masculine ; adherent labia majora resembling a scrotum, hypertrophied clitoris resembling a penis with hypospadias, viz., perforated by the urethra, and like a normal penis ; Ectopia of the ovaries in the labia simulating testicles in a scrotum ; *internal genital organs feminine*. (c) Complete : External genital organs approaching the masculine type, *internal genital organs feminine*, more or less developed, with simultaneous development of the Wolffian ducts to a certain degree.

II. *Masculine Hermaphroditism*.—(a) Internal : External genital organs masculine, with *masculine internal sexual organs* ; more or less development of Mueller's ducts

(uterus, oviducts, vagina, broad and round ligaments). (b) External: External genital organs feminine in appearance, in consequence of penoscrotal hypospadias, with or without cryptorchism; *internal genital organs masculine*. (c) Complete: External genital organs feminine in appearance; *internal genital organs masculine*, more or less developed, with simultaneous development of Mueller's ducts.

Penoscrotal hypospadias with cryptorchism and the development of a more or less rudimentary vagina simulates the presence of a vulva; hypertrophy of the clitoris simulates hypospadias of a penis; labial ectopia of the ovaries, the testicles; adherence of the labia majora, the scrotum; non-adherent labia, a divided scrotum.

As already stated, an excessive evolution of the genital ducts of one type will be associated with deficient evolution in those of the other, if simultaneous evolution goes on at all.

Moreover, we have to consider: The general external appearance of the individual, sometimes homologous, sometimes heterologous to the genital glands; the evolution, homologous or heterologous, of the secondary sexual characteristics, the form of the bones and skeleton, the evolution of the muscular system, of the adipose subcutaneous pannicle which, when well developed, gives the characteristic roundness to the outlines of the female form, and when scanty allows, as in the man, the contour of the muscles to appear; the shape and size of the larynx; the abdominal or costal type of respiration; the pitch of the voice; the condition of the mammæ; the general development of hair on the surface of the body, more especially upon the face (upper lip and chin), the chest, abdomen, limbs, pubic and peri-anal region; moreover, the sexual feeling of the individual, sometimes homologous, corresponding to the sexual glands, and therefore directed towards the other sex; sometimes contrary, or heterologous, in favour of the sex of the individual, homosexual, must be taken into account.

All the variations in the different forms of hermaphrodisism in the human being, when examined from the embryological point of view, are easily explained by arrest or excess of development in the two parts of the primitive bisexual organisation; but if we look for the ultimate cause of this abnormal development, heterosexual and opposed to the character of the sexual glands as it is, we have to face an enigma of nature still obscure and unexplained. As to the ultimate cause of the heterosexual or amphoteric evolution of the genital ducts, and that of the evolution of the external genital organs being incomplete (masculine) or excessive (feminine), we are still in the shades of vague hypothesis, the more so because every attempt to refer these malformations to mechanical causes has invariably proved futile. It would seem that the principal rôle in the etiology of these anomalies in development is that of the anatomical disposition of the arteries—that is to say, depends on the supply of arterial blood to the parts affected.

Morache gives the following scheme of the genital organs :—

	MALE.	FEMALE.
<i>Deep Organs</i> : nourished by the ovarian or spermatic branch from the aorta }	Testicle	Ovary
<i>Intermediate Organs</i> : nourished by the internal branch of the hypogastric artery }	Vesiculæ seminalis	{ Oviducts Uterus Superior vagina
<i>External Organs</i> : nourished by the external branch of the hypogastric artery }	Penis scrotum ...	{ Inferior vagina Vulva Labia

As each of these three series of deep, intermediate, and external organs is supplied by a special circulation, each may continue, or be arrested, in its development independently of either of the others. As a matter of fact, anomalies in the arteries have been found in anatomical specimens of pseudohermaphrodisism; their default, for instance, coinciding with anomalous development in the corresponding series; but the question is a new one, and has not been much studied.

On the other hand, the possibility of a psychic influence on the part of the mother, and the factor of heredity, cannot be excluded in face of the instances in which several members of the same family, sometimes belonging to different generations, have suffered from the same malformation of the genital organs. It is, for instance, an incontestable fact that hypospadias, balanic, penile, or scrotal, is often found affecting father, grandfather and son, or several brothers; I know a number of instances of mistakes in sex in which two brothers—males with hypospadias—were brought up as girls, and several families in which a thorough examination proved that three, and in one instance four, supposed sisters were males. I remember that an observation published by Lingard records that hypospadias occurred in males of six consecutive generations. The widow of one of the affected persons made a second marriage with a man without malformation of any kind, several sons and grandsons descending from this union had hypospadias. Lingard says that this remarkable observation supports the theory of indirect atavism, thus stated by Sedgwick:—"All breeders of cattle and other animals are familiar with the fact of females throwing back, that is reproducing, after impregnation by a second male, the peculiarities of some other male by whom they had been previously impregnated. That is not impossible in the human female."

The urogenital deformation is not merely a local deformation, but is essentially one of the phenomena of a general anomaly of evolution.

The sexual instinct in pseudohermaphrodites is most uncertain. Sometimes their sexual life is quite normal, sometimes it has little or no existence, while in other cases the inclinations are perverse and homosexual. There are even instances in which pseudohermaphrodites have carried on sexual commerce with men and also with women. Sexual inclinations at first normal towards the opposite sex often change, and afterwards become homosexual or

vice versâ. Krafft-Ebbing offers the following hypothetical explanation for this paradoxical inversion of desire; he looks upon the genital system as composed of three elements:—(a) *the genital glands*, with their excretory ducts (the ducts of Wolff and Mueller) and the organs designed for sexual intercourse; (b) *the spinal centres*, which act in exciting, controlling, and directing the processes of nutrition, secretion, hyperæmisation, erection, ejaculation, &c., &c.; (c) *the cerebral centres*, from which the complicated psychosomatic processes originate, all that is implied in the terms sexual life, genetic and sexual feeling, &c. These three elements, intimately united by the nervous system, are in constant reciprocal functional correlation. Their organisation is bisexual, the psychosexual centre only developing at the age of puberty, and the evolution of the sexual glands proceeding quite independently of that centre. As a rule in the human being only one half of the bisexual organisation is developed, the other remaining in a latent condition of arrest. But under certain pathological conditions, especially when the development of the genital glands is merely rudimentary, the corresponding psychosexual centre does not develop at all, while the opposite one, which should lie dormant, and has done so till then, undergoes evolution instead of the one corresponding to the glands; that is to say, the feminine psychosexual centre develops in an individual provided with testicles, or *vice versâ*.

In the evolution of the psychosexual centre of the genetic life of any individual, education, example and suggestion play, in my experience, a very important part. The male or female character of the genetic sense of pseudohermaphrodites depends very often on the sort of environment in which they are brought up, that is to say, upon whether they are educated as boys or girls; it must be set down entirely to the influence of suggestion if a male hermaphrodite, owing to mistaken sex brought up as a girl, afterwards shows a feminine genetic sense, seeks to

attract men and betrays perverse homosexual inclinations, and if when the mistake in sex is discovered he energetically opposes every attempt to make him abandon girls' petticoats, their way of life, and his feminine predilections and occupations, and if he declines to assume male attire and change his social position, and appear in future as a man. Such homosexual inclinations acquired by suggestion have in some cases been only temporary, and the male, though brought up by mistake as a female, has, sooner or later, recognised his virility, and has not hesitated to demand his social and sexual rights—sometimes somewhat abruptly. There have been instances in which a male person, recognising that his true sexual position had been misunderstood, has adopted male attire without consulting anyone, and without giving notice of the fact to the magistrate or any other authority; one such person found a mistress whom he put in the family way, and only demanded the adjustment of his social position on the evidence of that pregnancy—an incontestable proof of his manhood. In other cases the genetic sense with homosexual desire has persisted during the whole life of an hermaphrodite, whose true sex has been misunderstood; there have even been instances in which hermaphrodites of the male sex brought up as girls, have, when, too late, their true sex has been recognised, with all possible insistence demanded castration.

In very many instances the genetic sense of pseudo-hermaphrodites remains undecided, inactive, or altogether absent during all their life, or it may change its character once or oftener—being homosexual at one time, heterosexual at another. But while some pseudo-hermaphrodites never show the least sign of sexual desire, but remain indifferent to men and women, many others have been extremely libidinous, and have even broken down from the consequences of frequent sexual debauch. Some pseudo-hermaphrodites have carried on sexual commerce with men and with women, and others have practised sodomy.

Many a mistaken male brought up as a girl and married as a wife, has had his own mistresses out of doors ; one widowed after thirty-five years' sexual intercourse with a husband, after the death of that husband engaged in most passionate love passages with her former maid servant. In twenty-eight instances public prostitutes have been found to be of the male sex.

In regard to the retarded evolution of the genetic sense, I may refer to an observation of Berthold's, of Koenigsberg : A young woman, Marie S., aged 22, consulted him for hoarseness, and he found on examination with the laryngoscope that the vocal cords were as large as those of a man and, noticing that the patient was in the habit of shaving, concluded that the case was one of mistaken sex, the first instance in which such a diagnosis was due to the use of the laryngoscope. The young person was merely a male in whom hypospadias was complicated by an inguinal hernia ; and when informed by Berthold of his discovery, blushed to her forehead and in outraged modesty would not believe the Professor's statement. She left the hospital at once and never returned, though Berthold had begged her to come next day and be presented to Professor Virchow. He made a fruitless appeal to her parents, who merely said that they could not force their child to visit him against her will. Berthold had forgotten the case when seven years afterwards he received a letter begging him to assist his former patient in rectifying his social position, in order that he might marry a young girl who was his mistress. And the patient, formerly timid and shamefaced as a girl, at the latter period betrayed all the *aplomb* and assurance of a man, and appeared naked and not ashamed before a company of medical men.

As in this case so in many other hermaphrodite males brought up as girls, the truth is brought out by their claiming their rights of their own accord, and frequently by their demanding rectification of their social position in order to marry young girls they have got with child.

The mental condition of pseudohermaphrodites may be absolutely normal, but is very often altered and pathological. There is reason to believe that in certain cases a direct relation exists between the abnormal psychic condition and the malformation of the genital organs. Of the serious influence that such a malformation may have on the mental condition, the following case is a proof: A cryptorchid student having heard the celebrated Professor Cowper declare in a lecture that cryptorchids were not apt to cause conception, immediately left the lecture room and committed suicide.

The consciousness of being neither man nor woman, the constant and shameful fear that the malformation, though concealed with the utmost care, may some day betray itself and leave the sufferer to be the scorn and derision of those about him, are perpetually upsetting the mental balance and psychic repose of the unfortunate pseudohermaphrodite, who racks his brain demanding why he should be so afflicted, and seeking some way out of his miserable social position. Not daring to confide in anyone the poor hybrid passes his days and nights dwelling upon his lot; feeling excluded from the society of either men or women he cultivates solitude and avoids intimacy of any kind with anyone; he passes his nights in agony and tears; his health gives way, and he becomes suspicious, distrustful, shy, savage, irritable, irascible, vindictive, violent, and impulsive, to an extent that may drive him to crime, or he becomes moody, apathetic, and melancholy, till at last he ends his days in self-destruction. I have found four instances of suicide in male pseudohermaphrodites brought up as girls owing to mistake in their sex, three of these unfortunates succeeded in self-murder; the fourth survived, but his brother was accidentally poisoned by strychnine taken at the same time.

I have collected twenty-two instances in which psychic anomalies have been associated with such malformations, and it is my firm conviction that without any hereditary

psychopathic taint, an individual affected with malformation of the genital organs, especially when there has been a mistake as to sex, may, as soon as after puberty he becomes conscious of his abnormal organisation and his false social position, become melancholy and psychopathic. Certainly there are cases in which the mental anomaly is hereditary and independent of the condition of the genital organs. Very often the father or the mother has been a psychopath; in their hereditary anamnesis one comes across mania, general progressive paralysis, epilepsy, hysteria, alcoholism, &c. Not infrequently the pseudohermaphrodites end their days in the madhouse.

The importance of genital malformations in the development of mental affections has been pointed out by Christian, Legrand du Saulle, Magnan, and Debierre; Raffegau counsels alienists and forensic experts to look upon and deal with all subjects of such anomalies as degenerates, and Debierre says: "Admitted to be degenerates, they may quite easily become irresponsible impulsives. The chain is not broken; the neuropath begets the hysterical of fugitive and bizarre tastes, habits, and propensities; or gives birth to the choreics or epileptics, whose progeny become insane." Many of the French alienists insist that every psychopathic person ought to be examined as to the condition of their genital organs.

Matzner recently reported the following case: A man was accused of having violated a woman, Marie G., aged 41, in a wood. Medical examination proved that Marie G. was a male with hypospadias, brought up as a girl owing to mistaken sex. The law had already some years previously placed Marie G. under guardianship for imbecility and deprived the said G. of the right of dealing with any property. Owing to this certificate of imbecility, and to the accusation of rape being based merely on the word of an imbecile in the eye of the law, the court put a stop to the prosecution of the accused.

The statistics of 930 cases of pseudohermaphroditism,

with 33 personal observations which I have brought together, clearly show what disastrous consequences may follow an erroneous declaration of sex, and that not merely for the individuals immediately concerned, their family and connections, but for others beside. That collection includes 68 marriages between persons of the same sex, in consequence of such erroneous declarations! In 59 instances a wife or widow was discovered to be a male (with penoscrotal hypospadias, sometimes with cryptorchism, and with or without the presence of a vagina). In five cases the necropsy upon a husband proved that individual to have been a female pseudohermaphrodite, brought up, owing to mistaken sex, as a male. The clitoris resembled a penis in shape, and was perforated by the urethra as in a male; the labia majora were adherent, and by their thin union simulated a scrotum; the vagina passing through a prostate, ended in a male urethra; the uterus and ovaries were found in the small pelvis.

The most extraordinary case was that of Charles Meniken, who had led a married life from the age of 27 to that of 57. The necropsy disclosed the feminine sex of the cadaver, and that the cause of death was a uterine cancer. For thirty years this female pseudohermaphrodite had copulated with a woman.

In six instances in which there was no *post-mortem* evidence, the sex of a married individual was suspected to be erroneous, but could not be decided by the judges.

The collection also contains many actions for divorce on the ground of mistaken sex. In a case recorded by Otto, it was the third husband of the person concerned who first recognised the mistake in the sex of his spouse, and demanded the relief of divorce. In 1885, a case published by Badaloni, the divorce of Maura Faustina, attracted much attention for two reasons; the marriage was dissolved not merely because Maura Faustina was a male of mistaken sex, with hypospadias, and marital relations were impossible, but because the husband com-

plained that his supposed wife lay with other women, and made him a subject of ridicule to his acquaintances. After the divorce Maura Faustina in his right as of the masculine sex, demanded that his brother should give up to him half the property of their deceased father; the brother refused, and brought forward the counter-charge that his *ci-devant* sister had seduced his wife.

A necropsy on the widow Christine Bockfleisch, who died at the age of 82 of cancer of the bladder, revealed an error of sex; the body was that of a male with hypospadias. A midwife of the name of Maerker, formerly married, was charged with violating a young pregnant woman under the pretence that it was necessary to correct the position of a misplaced foetus. After the prosecution had begun numerous charges of the same kind were brought against the midwife. Examination disclosed an error of sex; Maerker was a male with hypospadias, and the charge of unnatural crime was withdrawn; but the midwife lost the right of practising that vocation.

In eighteen instances betrothals have been annulled at the last moment before marriage, in view of the fact that the intended bride was a male pseudohermaphrodite; in Worbe's case she had been betrothed twice previously.

Pseudohermaphrodites have in numerous instances been in difficulties with the various authorities—ecclesiastical and judicial tribunals, magistrates, police or gendarmerie, and even with the directors of schools. Before the ecclesiastical courts they have figured in numerous cases for divorce; before the civil law the most common accusations against them have been for rape, seduction followed by pregnancy, unnatural crimes, and even sodomy. There have been also cases of murder committed by pseudohermaphrodites, and in many instances they have been the victims of crimes committed by others.

In one case the directress of a boarding school for young girls, having observed sexual relations between two of her pupils whom she had surprised in the apparently

unnatural act of passionate intercourse, immediately summoned her medical man, who ascertained that the sex of one of the two pupils had been mistaken, and the youth up to that time brought up as a girl had forthwith to leave the institution in order to prevent a public scandal. In 1894 a governess named Wilhemina Moeller was condemned to death at Copenhagen; she had abused a little boy, one of her pupils, by sexual acts, and to avoid denunciation had afterwards poisoned him with chloral. Expert examination proved that Wilhemina Moeller was a male with hypospadias, brought up owing to mistaken sex as a girl. Marie Chupin also, who was accused of having thrown a child into a well to drown it, was also a male hypospadiac. In one of my own personal observations a young girl of 18 administered strychnia to three persons at the same time. She and her mother were saved, but a brother, aged 9, died from the poison. The girl declared that she had only intended suicide, and that the poison had accidentally fallen into the soup tureen before their family dinner. I found that the accused had normal sperma and declared him to be a male cryptorchid with hypospadias, the victim of an error of sex. As the judges decided that suicide only and not murder had been intended, the accused, after rectification of his social position, was merely condemned to an ecclesiastical penance, and placed under parental care.

But the pseudohermaphrodite has sometimes come into conflict with the authorities or police and been arrested, although no crime has been committed. On December 2, 1891, a gendarme arrested a young girl of 19 on the platform of the railway station at Pilsen, on the suspicion of being a man disguised as a woman. It was in vain that the prisoner showed her personal papers, in which she was described as Marie Karfiol, born on such a day, at such a place, and of such parents. In spite of her protestations, she was taken to the mayor's court, where medical evidence proved that there had been an error of sex, and that

Marie K. was a male hypospadiac. She then admitted that at the time of her birth there had been some difficulty in determining her sex, but she had been brought up as a girl. At the time of her puberty suspicions as to the real state of the case had led to her being taken to see the mayor of her village and the priest; but no further action had been taken. Later on she abandoned herself to her fate, being ashamed to speak to anyone of her doubts. Her pretty hair was cut off and she was dressed in men's clothes; but in her novel attire she had a very timid and wild appearance.

Of the crimes of which pseudohermaphrodites have been victims I will quote only two. Some years ago in Japan, a man fled from justice after assassinating his wife. Examination of the cadaver proved that the supposed wife had been a male hypospadiac, from error of sex brought up as a girl.

In a case published by Bellin, a young girl was the victim of rape by two men. She lost consciousness from a fisticuff on the head, and when she recovered was suffering from violent pain in the anus, from which blood was flowing. She laid complaints against the two men, and on medical examination it was found that she had no vagina, and that the anus had been torn in three places by anal coition. The young person thus violated was a male hypospadiac, and it was entirely owing to the crime of which he had been the victim that his true sex was recognised and his social position rectified. Those two men in violating one they took for a woman had unawares committed an unnatural offence.

We have said that there are many cases in which even a very detailed microscopical examination of the genital glands of an adult, whether obtained by castration during life or from the cadaver, is altogether insufficient to determine the true sex of the individual. This is the case in those not uncommon instances in which the development of the gland is so rudimentary and atrophic that it is merely

a sclerous ganglion composed of fibrous tissue and a few vessels, without any histological element whatever characteristic of either testicle or ovary. It is easy, therefore, to understand the difficulty that may arise in determining the sex in doubtful cases in the adult, and still more so in the new-born. If in an adult we cannot ascertain that either ejaculation of semen or menstruation has taken place, the examination of the genital glands alone can solve the question of sex. In the male hypospadiac if we find well-developed testicles, epididymes and spermatic cords in the scrotum, the solution is an easy one; but it is a very different matter where there is cryptorchism with or without arrested development. Similarly it may be extremely difficult to distinguish a female pseudo-hermaphrodite or gynander, from a male cryptorchid with hypospadias, or even from one without hypospadias, or with merely balanic hypospadias, when an hypertrophied clitoris traversed by the urethra simulates an erectile penis, as in the celebrated Charles Menniken, a woman married as a man, in Crecchio's case of Josephine (or Joseph) Marzo, or in a case I operated upon in October, 1903.

In the majority of cases the true sex, even when indeterminate at birth, declares itself spontaneously at puberty. For instance, the midwife in a case of doubtful sex may, after some hesitation, have advised that the child should be brought up as a girl, because the external genital organs, save for some hypertrophy of the clitoris, offered more resemblance to the female vulva than to the male organs. She saw a clitoris and vulva where there was merely penoscrotal hypospadias and bilateral cryptorchism, and the mistake was the easier to make because below the urethral orifice there was to be seen the opening of a vagina furnished with a hymen. At about the age of 12 years, let us say, the child begins to complain of pain about the groin; a diagnosis of inguinal hernia is made, and a truss applied, which, however, causes such

acute pain that the child refuses to wear it. The following year a diagnosis is made of a similar hernia on the other side, and a double truss is prescribed. When about 16 the young person notices erections of the clitoris, and complains to her mother of emissions of viscous fluid. The voice changes, and the mother wonders that the menses do not appear, while at school fellow-pupils remark the masculine down on the upper lip, and make mock of the moustaches, the masculine voice, and the flat bosom and the unfeminine figure. All in contact with the youth are struck by the appearance presented, which is rather that of a boy disguised in petticoats than that of a real girl. The parents for many years have had doubts as to the sex of their child, and now in view of her unusual appearance and her development of masculine tastes, at last recognise the error of sex. Or under other circumstances, unbalanced by the effect of voluptuous dreams, the youth may give way to evil practices, and may finally attempt sexual intercourse as a woman ; and so, the sexual instinct gradually awaked, may cause the disclosure of the error of sex. Or again, all doubt may be dissipated by a female friend already versed in sexual life, or by a doctor consulted by the girl herself, or by the mother, in order to know why at the age of 18 the catamenia have not appeared, and whether the girl is fit to marry and bear children, &c. Often enough the doctor will find that such inguinal hernias are merely the delayed descent of the testicles into the scrotum, and by the aid of the microscope will be able to decide whether the fluid ejaculated is semen with or without spermatozoa, or otherwise.

But though in the majority of cases the true sex can be determined at puberty, in a certain number the task before the medical man is a much more difficult one. I have myself now before me a pseudohermaphrodite nearly 20 years of age, who has been under my observation for eleven years, and whom I have examined many times since the age of 8 ; though I suspected that there had been

an error of sex, I was unable to decide the question till in September, 1903, one testicle descended and ejaculation took place. In regard to a new-born child of doubtful sex it is better to reserve one's decision than to risk a mistake, which may be followed by disastrous consequences. As to the registration of the sex and the civil rights of the new-born, the Government should admit as a new rubric, "sex undetermined"; the child should have to be presented for renewed examination at the age of 1 year, at that of puberty, and at certain intervals of time subsequently, until a decision could be arrived at.

But how should such a child be brought up? As the great majority of pseudohermaphrodites are masculine, Ahlfeld recommended that every child of doubtful sex should be educated as a boy; on the other hand, Lawson Tait advised that it should be treated as a girl on the ground that it is far easier to protect a child from the disagreeable results of a genital malformation in the social position of a girl than in that of a boy. This advice of Lawson Tait's deserves consideration, but with some reserve. It is well to remember that a male hypospadiac brought up owing to error of sex as a girl, and restored to his proper social position at puberty, will suffer far less from necessary changes in his mode of life than a female pseudohermaphrodite brought up as a boy would under corresponding conditions. There is, however, a danger that must not be lost sight of. Suppose that owing to an error of sex, an infant of doubtful character is brought up as a girl, according to Lawson Tait's advice, and attains the age of puberty. The supposed young girl of 16 then has her sexual instincts aroused by reading romances; sharing the dormitory of her fellow pupils, she watches every night and morning these maidens at their toilet, and without any restriction has opportunities of learning to admire the bodily charms of persons of the opposite sex. Would not this be enough to awake in him, however innocent hitherto in regard to sexual matters, desires that might

easily lead him to abuse the situation, in a way which might be followed by consequences even more serious perhaps for the companions sacrificed to his masculine desire than for himself? An example of the kind, which occurred at Paris, has come to my knowledge. A male pseudohermaphrodite, brought up from error in sex as a girl, was employed as forewoman in a manufactory in which only women were employed; but was not long in that position before he had behaved like a wolf in a sheepfold.

Such an individual, then, as we are considering ought to be watched with careful anxiety, not only as to his mental condition, but also with regard to his behaviour, in order to prevent any misfortune, any unexpected injury to his associates, and therefore all medical men, midwives, the clergy, masters and mistresses of schools, ought to be informed upon the practical bearings of pseudohermaphroditism and error of sex, in order that they should take warning in time, and consult a doctor of experience in these matters, directly their suspicions as to an error in sex were aroused.

The disastrous consequences of an erroneous declaration of sex upon the individuals who are victims of such mistakes, in regard to their mental condition, could not be more authoritatively exposed than they have been in the autobiography (*Souvenirs et impressions*) of the unfortunate Alexina B., for the publication of which we are indebted to Professor Tardieu. After being brought up as a girl, at the age of 22 she became a governess, but was discovered to be a man, and restored to her proper sex; her unhappy life, which had she been brought up as a boy might have turned out so differently, ended in suicide.

I will not here enter upon the question of embryological development, and the way in which hermaphroditism, male or female, comes about. The whole subject is completely treated in a work of mine, published in Polish,

with sixty-eight illustrations, in the *Proceedings of the Medical Society of Warsaw* for 1899.

The number of cases in which the surgeon is confronted by pseudohermaphroditism is much larger than is generally supposed. The most common are those in which he is asked by the parents to determine the doubtful sex of a child with malformed genital organs. As the feminine appearance of the external genitalia is chiefly due to penoscrotal hypospadias, his task, in order to recognise a masculine individual, will be to discover the genital glands, the testicles with their adnexa, if they lie in the divided scrotum or in the inguinal canals. If he succeeds in finding the testicles with their adnexa, on one or both sides, the individual is certainly masculine, even although the urethral meatus opens inside the orifice of a vagina and labia minora, which are merely the ununited borders of the corpus cavernosum of the male urethra, are present. In the new-born we cannot explore the rectum for the prostate or uterus, and these organs, even if found, would not at all decide the sex of the infant, seeing that the male pseudohermaphrodite may have a uterus and the female a prostate.

Moreover, in a new-born male, it is not easy to elicit the reflex of the cremaster muscles; one may fail to do so even by rolling the spermatic cord under the finger upon the os pubis.

Klebs insisted that the presence of the labia minora was a sufficient proof of the feminine sex, but this is not so, for there have been numerous male pseudohermaphrodites whose external genitals were exactly like a normal vulva; I may instance among many others an observation by Pozzi, in which the appearance of the vulva would not have excited the slightest suspicion of an error of sex, while surgical intervention by castration demonstrated that the patient was a male. Pozzi on performing herniotomy on a maid-servant, aged 33, found, in a hernia, a bicorned uterus, or rather one horn of a bicorned uterus

and a testicle. The vulva of that patient was absolutely normal in appearance, like that of a well-developed girl, and there was not the least trace of hypertrophy of the clitoris to awaken a suspicion of an error of sex.

The determination of the sex of a male new-born pseudohermaphrodite becomes even more difficult if cryptorchism is associated with penoscrotal hypospadias, and in that case it is better to defer one's decision even until puberty, than to risk any mistake.

I have an anatomical specimen taken from an infant, in which at 19 days old the sex was absolutely doubtful. Three of us, a surgeon, a pædiatric specialist, and a gynæcologist, had concurred in declaring the sex male. The child dying proved to be a girl, with enormous hypertrophy of the clitoris. There was a marked prominence of the clitoris and labia majora in front of the bony anterior wall of the pelvis, a more remarkable deformity than I have ever seen in male hypospadiacs.

Pseudohermaphrodism is often associated with other malformations, such as pelvis fissa, vesical exstrophia, epispadias, uterus bicornis, spina bifida, hydrorrhachis, polydactylism, sympodia, digital synechia, pes varus, palatocheiloschisis, atresia ani vel urethræ, and the like. In a great many instances it has been complicated by congenital inguinal hernia, hydrocele, or malformation of the kidneys. Many of these fœtus with multiple deformities, are not born alive, but sometimes one is, and may be saved by surgical intervention ; cases have, for instance, been successfully operated upon for atresia ani.

It is noteworthy that in several instances there has been much difficulty in the recognition of the sex where there has been vesical exstrophia and epispadias. The reason may perhaps be because the mother has found it much easier to keep the child comparatively clean in chemise and petticoats than if it had been put into trousers. One such hermaphrodite, owing to error of sex brought up as a girl, was placed in a lunatic asylum, and after rectifica-

tion of his civil position, was put into men's clothes ; but the very next day he was found to have divided the perineal seam of his trousers with a pair of scissors, because they prevented him from making water comfortably like a woman, as he had been accustomed to do all the time he had been in woman's clothes.

The chief and most frequent reason for a pseudohermaphrodite being brought before a surgeon is the wish of the parents that the doubt as to sex should be settled. The next, is to ask him to cure a hernia in a young girl who proves to be merely a male hypospadiac with delayed descent of one or both testicles. Nothing could be more absurd than to order a truss in a case of the kind, and it is not surprising that if one is ordered the child cannot be induced to wear the instrument, the pressure of which upon the testicle gives him pain ; another example of the disagreeable and even dangerous consequences of a mistake in sex to the person concerned.

Nevertheless this mistake is being still made. Assuredly it is by no means always easy, especially in an infant, to decide whether the case is one of the delayed descent of a testicle or of hernial ectopia of an ovary, and while it is true that inguinal intestinal hernia is very common among pseudohermaphrodites, it must not be forgotten that the contents of a hernia may include omentum, or a diverticulum of the bladder together with a uterus, possibly bicorned, an oviduct, or a tumour of the tube, ovary, or parovarium. Moreover, it must be remembered that in a man with quite normal external genitalia, or in a male hypospadiac, a uterus more or less developed, with its tubes and even with part of the vagina, may be found in a hernia along with one or two testicles.

Saenger, in a herniotomy on an unmarried governess, aged 32, who had never menstruated, found that the hernia contained the uterus, one tube, a parovarian cyst and a genital gland, which he took to be an ectopic ovary. As the vagina ended at a length of 8 cm. in a cul-de-sac,

and no solid body could be found by the rectum, Saenger, before the operation, thought that he had to do with a male pseudohermaphrodite, with inguino-labial (-scrotal) hydrocele on the left side. During the operation he abandoned this provisional diagnosis, as he believed the genital gland found in the hernia to be an ovary. What was his astonishment when the microscope proved that the gland, extirpated with the uterus during the herniotomy, was a well-formed testicle. In that operation there were three surprises each more startling than the former. In another patient, a maid-servant, aged 23, Saenger diagnosed labial ectopia of an ovary and performed herniotomy in order to return it into the peritoneal cavity, but as the processus vaginalis was obliterated he removed the gland. The microscope showed that he had extirpated a testicle.

I have collected forty-two herniotomies in which errors of sex were discovered, and such facts ought to be known to every surgeon: in three, operations were performed on married women for hernia of the ovaries, and the glands removed were testicles. In thirty young girls or married women, in performing herniotomy the existence of one or two testicles has been ascertained, and once the operation demonstrated the femininity of a pseudohermaphrodite brought up as a boy. In four instances the operation was undertaken simply to determine the character of the genital glands in the labia majora of young girls, and, testicles being found, the wound was closed without removing the glands.

Porro was the first to perform an exploratory incision of the labia majora simply to determine the sex, till then doubtful, of a young woman of 23.

On some of these unfortunates herniotomy has been performed more than once, on one side after the other, or for the recurrence of the hernia. In one instance a swollen gland was removed from the groin of a little girl, aged 11, and seven years afterwards the extirpated gland, misunderstood even after its removal, was found on micro-

scopic examination to be a testicle. In two cases recorded by Pech and Swiencicki, errors of sex were disclosed by the evacuation of inguinolabial hydrocele in women, for after the evacuation a testicle with its adnexa was found in the sac. In other operations a uterus with a tube and a testicle have been found in one hernia in persons supposed to be women, and these individuals have proved to be male pseudohermaphrodites.

On the other hand a uterus has been found, in other cases, in the hernial sac of a man, externally quite normal. Derveau performed herniotomy on a man, aged 67, the father of six children; the hernia contained a uterus with two tubes, the testicles occupied the place of the ovaries and a vagina terminated in the urethra. Similar cases have been met with by Billroth, Boeckel, Cartle, Faustino, Guldenarm, Thiersch, Stonham, Rydygier and Winckler, who came upon internal masculine pseudohermaphrodism in herniotomies performed upon male adults in whom there had been no error of sex. Bruehl, however, found a uterus and two ovaries in the hernia of a woman, aged 36, of masculine appearance with a beard, and having a clitoris 11 cm. long when erect.

Merkel quotes sixteen observations of the development of a uterus in a man, similar to that of Derveau, but mostly derived from necropsies. My personal researches would lead me to suppose internal masculine pseudohermaphrodism to be much more frequent.

In regard to the diagnosis of the contents of the labia majora in cases of doubtful sex, I have already mentioned the very variable contents of inguino-labial hernias. I have said that an ectopic ovary has often been taken for a testicle, or a testicle delayed in its descent for an ovary. I have spoken of male and female hydrocele; but I must also draw attention to the derivatives from the processus vaginalis peritonei, the diverticula of Nuck.

In the case of Claire Hacker, published by Litten, some of the consultants took the bodies contained in the labia

majora of that young woman to be testicles, and suspected an error of sex; Virchow, however, dissented, as he was unable to detect the epididymes by palpation, and considered them to be rather ovaries in labial ectopia and that Claire Hacker was really a female.

The necropsy proved that Virchow was right in regard to sex, that Claire Hacker was not a male hypospadiac, but a feminine pseudohermaphrodite. The cause of her death was a myxosarcoma of the right ovary, the left being normal and both being in the abdominal cavity. The bodies in the labia majora which Virchow had been the more inclined to take for the ovaries because they swelled during the catamenia, proved to be an hæmatocele, and a hydrocele of the processus vaginalis peritonei.

In addition to these herniotomies with unexpected results, I have collected thirty-one laparotomies performed on pseudohermaphrodites. On four occasions the abdomen was opened in order to find and extirpate the genital glands, as microscopical examination alone could determine the question of sex. Krabbel and Pozzi each extirpated in men large abdominal tumours, which proved to be ovarian; each in fact performed an ovariectomy on a patient who, owing to error of sex, had passed for a man. In another case an abdominal tumour in a woman diagnosed as a hæmatometra, was attacked by the vagina; in the paracentesis a vessel was wounded and the woman died. The necropsy disclosed an error of sex; the tumour was a sarcoma of the testicle in a male hypospadiac with bilateral cryptorchism, brought up by mistake as a girl. In twenty-eight cœliotomies there were no less than fifteen in which there had been an error of sex. In the case of a young woman in whom, after appearing, the catamenia ceased, Fehling diagnosed a hæmatometra; after paracentesis with a negative result, he came to the conclusion that the tumour must be ovarian. The young woman had a clitoris 5 cm. long; in the right labium majus there was a body which was taken to be the misplaced right ovary. Cœliotomy

confirmed the amended diagnosis ; a myxomatous cyst of the left ovary was removed and a hernia of the right ovary discovered.

A most singular case is recorded by Paton, an operation for pyosalpinx on an internal masculine pseudohermaphrodite. Paton performed a cœliotomy on a man, aged 21, in whom a large abscess at one side of the hypogastrium had been opened through the abdominal wall one year previously ; a pyosalpinx had in fact been incised without being recognised as such. Paton found that there was a uterus behind the bladder with two tubes ; on one side at the seat of the cicatrix of the old incision the tube was adherent to the abdominal wall ; the other tube, a pyosalpinx, was removed with the genital gland, a testicle, which lay in the normal position of the ovary. That man was a male pseudohermaphrodite with penoscrotal hypospadias. The opening which had been taken for that of the urethra led into a vagina in which the meatus urethræ proper was situated. The man had demanded relief for dysuria with pyuria : the catheter never entered the bladder but only the vagina, through which the pus contained in the tubes had found its way. A tumour noticed before the operation, but which had disappeared when the abdomen was opened, had been merely the bladder distended with urine. This case is quite exceptional, but one with which one ought to be acquainted before resorting to operation.

I will now refer to the cases in which the mother asks the surgeon whether her daughter may marry and have children, and why, although she is nearly twenty years old, her catamenia have not appeared.

This last question, more frequently than any other, has led to the discovery of an error of sex, and the practitioner, whenever he is confronted with a case of absolute amenorrhœa, should always remember the possibility of such a mistake. Under such circumstances to omit an examination of the genital organs out of consideration for the timid modesty of a young girl, may be a matter of great regret.

It is dangerous to content oneself with the idea that such a state is not altogether unusual ; that it is merely a case of hypoplasia of the genitalia ; only a case of chlorosis, and that, under treatment with baths and iron, the menses will not fail to appear. A medical work has recently been published under the title "*Cavete Hymeni*," but it is quite possible to conduct an examination without lacerating the hymen. If one would avoid the risk of a serious mistake it is essential to demand an examination.

Steglehner has published an instance in which the mother demanded an autopsy on the body of her daughter to ascertain why the girl had never menstruated, and the section proved that there had been an error of sex ; probably the mother had herself suspected the mistake. Gallay gives a similar case, in which a husband consented, at the request of the doctor, to a *post-mortem* examination of the body of his deceased wife. Just as the medical man is consulted by young unmarried pseudohermaphrodites on account of their malformation, by married persons of the same category his advice is sought on account of sterility or dyspareunia. In feminine pseudohermaphroditism there is an hypertrophy of the clitoris more or less considerable, so that when the member is traversed by a urethra it may closely resemble a normal penis ; there is also a coalescence of the labia majora simulating an empty scrotum, and as there is neither vulva nor vagina cohabitation as a woman is impossible. In other cases less uncommon, the clitoris is hypertrophic and erectile, and the labia are abnormally united to each other, save at the spot where there is the urethral orifice ; it was in such a case that in a married woman Huguier separated the labia by the sweep of a bistoury, and revealed the orifice of the vagina, and she was thus enabled to fulfil the duties of wedlock, and afterwards became pregnant. Similar operations have been performed by Sonnenburg and by von Mars, and I propose to do one myself this week upon a girl aged 25, after a preliminary coeliotomy and

amputation of a hypertrophied clitoris. The celebrated Marie Madeleine Lefort was a subject of the same sort of external feminine pseudohermaphrodisism. It was Béclard who recognised her true condition, when most of the medical men who had examined her supposed her to be a cryptorchid with hypospadias ; Béclard succeeded in passing a sound into the vagina through an orifice below the hypertrophied clitoris, and in determining its presence there and the existence of a uterus by rectal examination. The simple procedure adopted by Huguier would have made Lefort capable of wife and motherhood. Béclard's diagnosis of femininity was made in 1815, when Lefort was 16 years old, and he then suggested the discission of the labia majora. The autopsy thirty-nine years later proved that he was right. Marie Madeleine Lefort had menstruated.

In masculine pseudohermaphrodisism one finds penoscrotal hypospadias with or without cryptorchism on one or both sides. The first thing is to find the testicles, and if that cannot be done to examine the fluid ejaculated ; one should also look for the cremaster reflex. By the vagina, if there be one, otherwise by the rectum, one may explore for the prostate, uterus, seminal and genital glands, although the diagnosis depends exclusively on the determination of the testicles and their product the semen, or of the ovaries or menstruation.

Maude records a case of error of sex that is almost unique. In a girl, aged 13½, he recognised the masculine sex ; there was a normal penis, but below its base the scrotum was divided into two parts, each containing a testicle. There was a navicular fossa and an opening into a vagina admitted the finger ; no uterus or hymen. Here the hypospadias was limited to the scrotum, the penis not being involved, one of the rarest varieties of this anomaly. That individual after puberty would have been as well capable of intromission and impregnation with his normal penis as of submitting to the embraces of a man.

When with penoscrotal hypospadias there is also a vagina, and that vagina is considerably dilated by frequent cohabitation, as in the case of certain prostitutes, who have been masculine pseudohermaphrodites, an error of sex may easily be made. Polaillon, who examined an individual of this kind repeatedly, found the vagina longer and wider on every occasion until, after some years, he was able to introduce a large cylindrical speculum. After the death of this person the autopsy proved to the general astonishment that he was a male hypospadiac, that there was not any vagina at all, and that the deep canal, which had admitted a large speculum up to the end, was merely an artificial cutaneous depression, the result of many years' sexual intercourse with men. Ricord, in the case of a gay Parisienne, who had demanded a permissive card from the police, certified an error of sex and that the individual was a male, and the card was refused.

An error of sex in a male hypospadiac brought up as a girl, reveals itself comparatively frequently by seminal ejaculations; but one is very seldom able to find the openings of the vasa deferentia alongside the lumen of the vagina. In the thirty-eight personal observations of my own I have only once succeeded in finding and demonstrating those openings during life. There have been cases in which they were visible to the naked eye, but it would be necessary to witness the ejaculation to find both orifices.

In a certain number of cases the question of sex, even in an adult, cannot be determined; but when the mistake is evident, ought one in every instance—if, for example, it concerns a wife living in complete accord with her husband—to reveal one's discovery and enlighten the wedded pair on the true state of affairs? The question is a new one; up to the present time the doctor has hesitated to interrupt the happiness of such couples, and has held his tongue; but in case of a demand for divorce on account of dyspareunia or sterility, he undoubtedly ought to speak. Hitherto the law has taken no account of these

cases; but even though the wedded pair are entirely ignorant of the error of sex affecting one of them, and do not therefore demand divorce on account of identity of sex, the marriage is still null according to all laws, civil and ecclesiastical. If in ignorance of the error of sex, such a pair do not demand divorce, can the law insist upon it? That question has not been decided. In actual life such unions are often undisturbed, though there have been cases in which divorce has been demanded and obtained.

In differential diagnosis some stress has been laid on erection. Charles Menniken was married to a woman for a long time; he had an erectile penis traversed by a urethra, and carried on sexual intercourse. Nevertheless that married *man*, as was proved by necropsy, was really a woman with uterus and ovaries, and even a vagina ending in a male urethra. In the same way an individual described by Crecchio, although possessed of a penis traversed by a urethra, was a woman. In several known instances the hypertrophied erectile clitoris of a feminine pseudo-hermaphrodite has enabled her to copulate as a man, by introducing that organ into the vagina of a woman. It has, however, been necessary for the woman to take an unusual position. As a matter of fact erection has no diagnostic value at all.

Menstruation is, on the other hand, characteristic. There have, however, been exceptional cases in which a sort of pseudomenstruation, periodic genital hæmorrhages, have been observed in masculine hermaphrodites, as for example in the celebrated Catherine Hohmann, who subsequently under the name of Charles, after his true sex (semen) had been disclosed, married a woman in New York.

It is not, though generally supposed to be, the case that masculine hermaphrodites with hypospadias are impotent and sterile on that account. There may be more difficulty in the intromission of the organ on account of its malformation, and therefore more difficulty in impreg-

nation, but many hypospadiacs have had several children, as is well proved by the instances in which that deformity has been hereditary, and transmitted for one, two, three, four, five, or, as in the case recounted by Lingard, even six generations. Sterility in masculine pseudohermaphrodites does not depend upon hypospadias but rather upon the more or less rudimentary development of their testicles, especially when there is cryptorchism.

Certain sexual characteristics have been called secondary; the height of the stature, the form of the skeleton, especially of the thorax, pelvis and long bones, the development of the muscular system, that of the subcutaneous pannicle of fat, and of the hairy system generally and locally (beard, moustache, mons veneris, genitalia, perineum and limbs); also the shape and size of the larynx, the more or less accentuated ossification of the thyroid cartilage, the quality of the voice and the presence or default of certain glands; but though useful as confirmatory evidence, none of these points are decisively diagnostic. The same may be said of the existence of a hymen, vagina or uterus with its tubes and ligaments, of the labia minora and prostate, as may be easily understood, since the ducts of Wolff and those of Mueller exist in every embryo.

For the sake of completeness I must mention that in twenty-eight instances of pseudohermaphroditism I have found tumours, benign or malignant new growths, generally affecting some part of the urogenital system; simple ovarian cysts; sarcoma, carcinoma, myxoma or teratoma of the genital glands, especially in cryptorchids; myofibroma or carcinoma of the womb; or carcinoma of the bladder or rectum, &c.

The case of Charles Menniken recorded by Engelhardt and already alluded to, is unique; a man who married as a woman, died from cancer of a uterus the vagina of which ended in the male urethra. This is not the place to discuss whether there is any causal connection between carcinoma and congenital malformation of the genital organs; the

partisans of the parasitic theory of carcinoma say there is no connection of the kind ; I, who am not a partisan at all, may, however, say that I think such a connection not impossible, especially considering the effect of diminished nutrition on the organs affected by these malformations, and also the frequency of malignant degenerations in cryptorchism. Sarcoma and carcinoma too frequently affect a testicle retained in the peritoneal cavity or inguinal canal, for us to deny that such ectopia is associated with a predisposition to malignant disease. I need not insist on the carcinoma of the bladder in the male hypospadiac. (Christine Bockfleisch whose urethra and bladder had for many years of married life fulfilled the office of a vagina.) Such facts offer much for discussion.

More difficult to understand than any of the cases of errors of sex to which we have referred, is the fact that a woman with prolapsus uteri was supposed to be an hermaphrodite until Saviard explained the true nature of the organ ; the only possible explanation is that this occurred in the middle ages.

As curiosities I may mention the following exceptional cases from among those I have collected. There have been two instances in which a soldier has proved to be a woman ; in one, menstruation betrayed the fact, and the individual had to leave the army and adopt female attire ; the other gave birth to a child ; a similar case gave rise to the well-known phrase : "Mas mulier, monachus, mundi mirabile monstrum." Again, a youth, servant in a monastery, was, for having stolen a silver cup, condemned to be whipped, naked, before the whole community, but begged not to be stripped and put to shame as he knew he was a girl ; this was the case, and the true sex and existence of menstruation having been ascertained, not only was the punishment remitted, but the young person was provided with female clothes and a dowry, and her true sex having, thanks to the accident of her theft, been recognised, she was married to a wine seller, by whom she had several children. Morache,

in his recent work, "Le mariage," relates that for several years he was at college with a fellow pupil, an excellent comrade, extremely intelligent, a moderate worker, taking an excellent position in the classes, who, menstruation having appeared and revealed an error of sex, was suddenly removed by her parents; she afterwards became a beautiful woman and an excellent mother. There is even an instance told of a male pseudohermaphrodite brought up mistakenly as a woman, who became abbess of a convent and died in that dignified position at an advanced age.

The Canoness Magdalena Mugnoz, after seven years in a cloister, was expelled because she was found to be of the male sex: and at the Convent des Filles de Dieu de Chartres, the Canoness Angélique de la Motte d'Aspremont, was accused of having played the man with her religious sisters, and the woman in her nocturnal escapades from the institution, and was deprived of her dignity as canoness and imprisoned.

Two other questions that may bring a pseudohermaphrodite before a surgeon must be considered: first, the parents, or the individual concerned, may demand the amputation of an hypertrophied clitoris, or of a hypospadiac penis, and although such requests are not common, it is well to know that they may be made. In a case in which Hector le Nu detected an error of sex, the parents were convinced that their child was a girl, and desired the operation done; but he refused to perform it as not urgent, but in reality one of complicity, for the youth was merely a male with hypospadias, brought up as a girl from error of sex. But the operation has been performed. Aveling amputated an hypertrophied clitoris; Dr. Berendès did as he thought the same thing in a case afterwards determined as masculine by Landau. Tauber performed it on a young person of 23, although he was aware that two years previously in a bilateral herniotomy, two normal testicles had been removed from the same patient. Quite recently (November, 4, 1902) Hartmann reported to the

Surgical Society of Paris that he had in 1892 removed an hypertrophied clitoris from a little girl, aged 7, to prevent self-abuse ; he saw the patient ten years later, and finding a uterus and vagina, judged her to be really a girl. In my opinion Hartmann gave no positive proof that that person was feminine, and it seems more probable that he merely mutilated a male hypospadiac. The mistake, if it was one, was not very serious ; but one ought to hold to the principle, "*Primum non nocere.*" The operations of Berendès and Tauber seem quite unjustifiable. What reason could there be for amputating a hypospadiac penis from a man ? It is worth remembering that a well-known French surgeon was assassinated, from vengeance, by a man from whom he had taken the testicles in order to cure a varicocele.

But the male hypospadiac may demand surgical relief for other reasons : for the pain caused by the erection of the penis, owing to its being bound down in a curve by a cicatricial band. A plastic operation to divide such a band and unite the edges of the incision, so as to heal longitudinally, is certainly then justifiable, and has sometimes been performed, though with very uncertain results, as the cicatrix nearly always contracts in the end. The surgeon's proper field of action is when a male pseudo-hermaphrodite, a penoscrotal hypospadiac, desires the plastic repair of his penis and scrotum, and operation then is much more efficacious. Thiersch, uncertain that the results would be satisfactory, would not volunteer this proceeding, and only undertook it at the express wish of the interested person. But since his time surgical art has made such advances in technique, that Castellana of Palermo, succeeded by a series of operations in conferring on Carmela, afterwards Carmelo Caponetto, the ability to make water like a man, in an upright position. The supposed girl was a penoscrotal hypospadiac with a double vagina, and contracted gonorrhœa at the age of 15. Castellana succeeded in uniting the two sides of the

divided scrotum and in reconstructing a urethra split almost as far as the balanic orifice of the canal. The patient had his male civil rights established, and was so charmed at being able to make water standing up without wetting his trousers, that "ex voto," he deposited the long beautiful hair he had worn as a girl in one of the chapels of the Church of the Madonna della Piëtraperzia at Palermo.

The extreme value of such a plastic operation may not at once strike even medical men—it is apparently such a simple matter. But consider the difficulties that a male hypospadiac has in relieving himself when he wants to micturate. Of course he cannot make use of the public conveniences for men, still less would he dare to enter those for women. The consequence of this difficulty are evident, and for him this surgical relief, successfully given, is one of the greatest possible interest.

As a surgical curiosity, I may here mention a case of Nitze's, published by Kapsammer. Nitze, at an operation on a man, removed a phosphatic urinary calculus, weighing 162 grammes, which had formed in a utriculus masculinus, communicating with the prostatic portion of the urethra by a narrow orifice situated in the middle of the verumontanum.

Finally, before concluding this review of the practical aspects of pseudohermaphroditism, I must mention that, in several cases, a doubtful sex has been in the first instance declared to be feminine, later on masculine, and again later feminine, that is to say, that the opinion as to the sex of the same individual has been changed several times. For example, Anne Grandjean was baptised and up to the age of 14, brought up as a girl; afterwards, on the advice of her confessor, as a boy, and called Jean. He married but had no children. Another confessor forbade his wife to continue to consider Jean as a man on the ground that his sex was feminine. The marriage was annulled, and Jean and his wife were condemned for profanation of the Sacrament. At last after various episodes, this cruel

verdict was annulled; but Jean was forced to resume female attire, and was for ever interdicted from attempting sexual relations with any woman. In a case related by Otto, a peasant, Kaluza, the third husband of his wife, sought a divorce, and the medical experts decided that the wife was really a woman, and that the dyspareunia depended on the organisation of the husband himself. On appeal a new commission decided that the wife was a male hypospadiac. It is remarkable that neither of the previous husbands had remarked anything unusual about that person. Again Josephine Marzo was baptised as a girl, and at the age of 14 was declared to be a boy; but the necropsy at an advanced age proved that she was a woman. In a case already referred to Saenger several times changed his opinion as to the sex of his patient.

The enormous frequency of these mistakes prescribes an extreme caution in determining the sex in any doubtful case. It is far better to abstain and defer any decision to a more advanced age than to risk an error of which the results might be disastrous. It is therefore with great show of reason that two French and one Italian medical men have demanded that the rubric "sex indeterminate," should be admitted in registering a birth. As the child develops the sex can be declared either later, when it records itself or by means of expert medical examination, or even by a diagnostic operation. As yet no legislation has consented to that demand and sanctioned three rubrics, that is to say, S. M., S. F., and S. I., instead of two for the description of the sex of new-born infants. Indeed, as regards pseudohermaphrodites, cases of doubtful sex, and errors of sex, the laws vary very much in different countries

Warsaw, November, 1903. [A list of the author's different published works relating to pseudohermaphroditism will be found *ante* pp. 175, 176. To those who have reason to take especial interest in the subject, "Interessante

Beobachtungen aus dem Gebiete des Scheinzwitterthumes” and “Chirurgische Ueberraschungen auf dem Gebiete des Scheinzwitterthumes,” reprints from the *Jahrbuch fuer sexuelle Zwischenstufen*, 1902 and 1903, will prove particularly interesting. Some of the earlier works were noticed in this Journal, *ante* vol. xvi. p. 104. A recent observation by Simon (p. 106. August, 1903), and a case of Sir Hector Cameron’s appear not to have been known to the author at the time of writing.—ED.]

EDITORIAL.

DEPLORABLE DEATH RATE.

WE have received a letter, which as it has appeared in the *Medical Press and Circular* of November 4, 1903, it is not necessary to produce here, stating that at Rangoon, the Lying-in Hospital has been converted into one admitting not only women for their confinement, but medical and surgical cases of various kinds, not even excluding infectious disease. Our correspondent does not say when this change was made, but declares that in the year 1901 there were 309 obstetric cases treated, 212 births and 15 deaths of the women and 24 still births. In 1902 there were 307 obstetrical cases, 223 births, with 22 still births, 22 deaths in childbed and 11 deaths in other women.

These figures are said to be taken from "Notes and Statistics on Hospitals and Dispensaries of Burma," for the year 1901 and 1902, issued by the Inspector General of Civil Hospitals, Burma, but are not stated in such a way as to indicate very clearly the mortality in childbed, nor why in the year 1901, among 309 obstetric cases there were, including those born dead, only 236 births; this may possibly be accounted for by the fact that, in the annual returns from which they are quoted, out patients and in-patients are grouped together. However, on the supposition that the figures are not inaccurate, we are justified in concluding that in 1902 the proportion of deaths among the women confined in the hospital was 1 in 20.45 at least, or upwards of 4.85 per cent., while

if the number of obstetric cases treated in excess of the number of births were out-patients, the puerperal mortality in the hospital amounted to very nearly 10 per cent.

The danger of treating lying-in women and general medical and surgical cases under the same roof and by the same staff, is a fact so well established, that we can hardly understand that any qualified medical practitioner would countenance, much less advise, such a course, or that there could be, as our correspondent states there is, any difference in opinion on the question among the medical profession in Rangoon. It is, however, difficult to believe that the authorities would have sanctioned the conversion of a maternity hospital into one for general diseases as well as midwifery cases without responsible advice. We write with some reserve as we have not had access to the official returns quoted in the letter, but in "Notes and Statistics on Hospitals and Dispensaries, Burmah, 1900," the Inspector General states that in 1899, there were 356 confinements in the hospital and 9 deaths (2.53 per cent.); in 1900 334 confinements and 8 deaths (2.4 per cent.); in 1900 general diseases of various kinds were under treatment, but whether in the hospital or as out-patients the report does not show, but Inspector General Little was evidently not quite satisfied even then with the management, as the following passage from page 2 of his report shows :—

"I think more could be done in developing and extending out-door treatment, and I hope ere long to see the external department better attended by *purely gynæcological* cases." (The italics are ours.)

We have purposely refrained from quoting the statistics of other maternity hospitals differently situated; a death-rate which has apparently risen from 2.53 to nearly 10 per cent., in four years, not merely in itself demands investigation, but is a deplorable instance of the results of supine or ill-advised neglect of well accepted principles

in hospital management. If lying-in women are to be admitted into the Dufferin Maternity Hospital, they should be completely isolated even from gynæcological cases, and general diseases should, in every possible way, be excluded. As one of the main objects of the Institution is to train Burmese women as midwives, and as there is a well equipped general hospital of 460 beds nearer the town, there seems to be no good reason why this should not be done.

BRITISH GYNÆCOLOGICAL SOCIETY.

GYNÆCOLOGICAL NURSING EXAMINATION.

AN examination for the Society's certificate in Gynæcological Nursing was held on September 24 and October 1, the written paper being taken on the former, and the *viva voce* examination on the latter, date. The *viva voce* examination was held at St. John's House, by the kind permission of the authorities. Each candidate had a quarter of an hour's examination in practical nursing details by two Matrons, and then a quarter of an hour's by the medical Board of Examiners. Such a test must afford a very accurate idea of the candidate's knowledge of her subject, and the high standard of the Society's examinations will undoubtedly make its Certificate of great value to nurses in the future.

The questions proposed in the written examination were as follows :—

(1) What is the cause of a ruptured perinæum, and how would you prepare the patient for the necessary reparative operation, if this be performed six months or more after the accident ?

(2) What procedure would you adopt if directed to wash out the bladder ? What solution is most often used for this purpose, and of what strength ?

(3) How would you prepare gauze strips for packing the uterus, and how long are these usually left *in situ* ?

(4) What is a rigor ; and what would you do for the patient who was suddenly seized with one ?

(5) How would you prepare the sponges or pledgets for an abdominal operation .

(6) After an abdominal section, what variations in the temperature and pulse would you watch for, and what conditions would such variations severally denote ?

The following candidates were successful on this occasion :—

Miss Margaret Anderson, certificate from the London Temperance Hospital (one year's training); also certificate from the Birmingham and Midland Hospital for Women (three years' training).

Miss Helen M. Craig, certificate from the General Infirmary, Worcester (two years, including five months' training in gynæcology).

Miss Martha Hood, certificate from the Brownlow Hill Infirmary, Liverpool (three years, including three months' special training in gynæcology).

Miss Pinkney, certificate from the West Herts General Infirmary (one year, including three months' gynæcological training).

Miss Elizabeth Thompson, certificate from the Adelaide Hospital, Dublin (three years, including three months' special training in gynæcology).

Miss Bessie Wingfield, certificate from St. Mary's Hospital (one½ year), and also from the Chelsea Hospital for Women (two years).

REVIEWS.

DIE PATHOLOGIE UND THERAPIE DER UNFRUCHTBARKEIT DES WEIBES (THE PATHOLOGY AND TREATMENT OF STERILITY IN WOMEN). von Dr. Ferdinand Schenk, I. Assistent der k.k. deutschen Universitaets-Frauenklinik, Prag. Berlin : S. Karger. London : Williams and Norgate. 1903. 8vo, pp. 128. Price 3s. 6d. net.

There is perhaps at the present time no subject in gynæcology that more requires a careful revision, both as regards the theories most generally held and the methods of treatment most commonly adopted, than Sterility in Women.

From time immemorial it has been held, that, provided the man was not impotent, the cause of sterility must be looked for in the woman, and this view found strong support in the mechanical theory of sterility and the best method of curing it, put forward so clearly and convincingly by Marion Sims in 1866, in his celebrated work on Uterine Surgery.

It is true that both Scanzoni and Gruenewaldt declared that inflammation in and around the uterus was a much more important factor, and Noeggerath in 1872 drew attention to the rôle that gonorrhœa played in the etiology of sterility. But it was not till after the discovery of the gonococcus by Neisser, in 1879, that gynæcologists began to appreciate the true importance of gonorrhœa in preventing conception.

Starting from these facts, and having at his disposal the whole of the statistics on the subject collected by the late deeply lamented Professor Saenger, Dr. F.

Schenk has given in the work before us, an interesting summary of the latest anatomical and physiological facts that bear on the question, as well as an exhaustive investigation of the Etiology, Statistics, and Treatment, of Sterility in Women.

In that summary nothing has interested us more than the theory lately put forward by Fraenkel on the nature and functions of the corpus luteum, which he looks upon as having the structure and function of a gland, very like the acini in the liver, and the cortical layer of the suprarenal capsules.

Its functions, he holds, consist in furnishing a periodical impulse to the nourishment of the uterus, whereby the mucous membrane is prepared for the implantation of the ovum, and also in influencing its nourishment there, besides being the organ that determines the monthly hyperæmia of the uterus, which is the cause of menstruation. In cattle it is said that persistence of the corpus luteum prevents the œstrum, and thus produces sterility.

In considering its etiology, sterility is called *primary* when the woman has never conceived; and *secondary* when she has borne one or more children, but has become unfruitful from some cause, puerperal or otherwise.

Schenk classifies all cases of sterility according as they are due:

1. To pathological-anatomical changes which are local :
 - a) Anomalies of development;
 - (b) New growths;
 - (c) Inflammation and its results; or
2. To pathological-anatomical changes, the cause of which is a general one.
3. Those without any ascertainable anatomical foundation :
 - (a) Those due to general causes;
 - (b) Or to functional derangements.

In regard to the anomalies of development, the ques-

tion naturally arises as to how far stenosis of the os and cervix may be a direct cause of sterility.

According to Kehrer the percentage is 8 per cent., P. Mueller 4 per cent., Chrobak 6 per cent., Kisch 7 $\frac{1}{2}$ per cent., Schaeffer 2.32 per cent. and Jacquet 14 per cent.

Hypoplasia of the ovaries with an infantile or even with a normal uterus, is a not uncommon cause of sterility.

In regard to new growths, there can be no doubt that cancer has considerable influence in causing sterility, but opinions as to the effect of fibrous tumours on child-bearing are as yet by no means settled. Hofmeier, in 1894, asserted that fibrous tumours were not to be considered as causes of sterility, but that on the contrary, in some cases, they even favoured conception. Against this view Fraenkel has brought forward many forcible objections; the truth probably being that though the effect of fibrous tumours upon conception is not by any means as great as we used to suppose, they have nevertheless a certain, though hitherto unexplained, influence in preventing it.

That ovarian tumours have a like tendency is undoubted; this, however, is often merely mechanical, as is shown by the cases in which pregnancy has followed the removal of the tumour.

The acute infectious diseases, such as typhoid fever, cholera, scarlatina, smallpox, and pneumonia, can produce either primary or secondary sterility: and, among the chronic infectious diseases tubercle has a similar effect.

Noeggerath, in 1872, was the first to draw attention to the serious results of gonorrhœal infection, but his views at first attracted little notice. He asserted that 80 men in every 100 have had gonorrhœa before marriage, and that 72 of these, or 90 per cent., remain permanently uncured; that of the women who marry such uncured men 90 per cent. become themselves

infected, remain invalids for years, and are permanently sterile. No doubt these figures are a good deal exaggerated, still, the statistics of Saenger, Zweifel, and Witte, show that the number of women who are infected varies from 10 per cent. in private practice (Zweifel) to 40 per cent. in public institutions according to Saenger's returns from the Leipsic Lying-in Hospital, and to 28·8 per cent. in Martin's Klinik (Witte).

It seems to be agreed that the favourite localisations of gonorrhœa in women are, the urethra for acute, and the cervix uteri for chronic infection. There is, however, great difference of opinion as to the proportion of cases in which the infection extends from the cervix to the endometrium: Wertheim says the infection seldom stops at the inner os, while Bumm holds that it rarely spreads into the cavity. Considering the large number of cases in which we find gonorrhœal affections of the adnexa, we must rather agree with Wertheim's view as to the frequency of the infection of the endometrium. That a large number of adnexal diseases are due to such infection was first pointed out by Noeggerath; Saenger put them down at 33 per cent., and in 2,659 collected cases of four observers, the percentage was 39·3.

Almost at the same time that these facts as to the effects of gonorrhœal infection in women became established, a radical change took place in the views held as to the curability of gonorrhœa in men, the frequency and seriousness of its complications, and especially as to their effect on the procreative powers. It was found that urethritis posterior was not only very common, but had a great tendency to spread to the neighbouring parts, the epididymis, vas deferens, vesiculæ seminales, and even to the prostate, thereby causing oligospermia, aspermia, and necropermia.

One of Saenger's greatest services was, that he drew attention to the fact, first noted by Noeggerath, that the most violent forms of gonorrhœal infection may follow

delivery or abortion, and are then often mistaken for puerperal septic infection. In such cases, as a rule, the symptoms do not come on for a considerable time (from six to eight weeks) after the confinement. They may be due to an infection before or during the pregnancy, or to infection by the husband after the confinement. In such cases the disease is very apt to spread upwards to the tubes, ovaries, and peritoncum, and leave the woman infertile. This is the usual origin of what is known as "one-child sterility," the frequency of which is estimated by Annsell at 7.5 per cent., by Kisch at 5.25 per cent., and by Kleinwaechter at 8.32 per cent.

It has been suggested that there are two sorts of gonorrhœal infection, one producing an acute and the other a chronic inflammation. This cannot be the case, for infection from a mild case may produce a severe one. The severity must then be due to the localisation. If the infection remains below the inner os, the symptoms are mild; if it spreads upwards to the body and to the tubes, the symptoms are severe. A certain tolerance, however, is produced in the mucous membrane, so that after a time married people cease to infect each other alternately; moreover, the reaction of the mucous membrane to the toxin is different in different individuals.

The diagnosis of acute gonorrhœa in women is not generally difficult, but in chronic cases we may have to examine the discharge many times before we can demonstrate the coccus. There are, moreover, five different sorts of cocci and short double-bacilli which closely resemble the gonococcus, but from which the latter may be distinguished by its size, its typical intracellular arrangement, and by the results of staining by Gram's method.

Other symptoms that may help us in the diagnosis are: chronic urethritis, especially when Skene's glands (ductus paraurethrales) are involved, and chronic inflammation of Bartholini's glands, which can generally

be recognised from the crimson patches surrounding the openings of the ducts, called by Saenger "*maculæ gonorrhœicæ*."

The diagnosis of chronic adnexal disease of gonorrhœal origin frequently depends on finding the uterus fixed in retroflexion, the tubes thickened, and the ovaries adherent and prolapsed.

Saenger has described a number of residual symptoms also, which remain long after the gonococcus itself has disappeared. One of these is "*vulvitis maculosa persistens*," characterised by the red spots around the mouths of the ducts of Bartholini's gland already described, and similar spots around the orifice of the urethra and the paraurethral ducts, as well as elsewhere on the vulva. Bartholini's glands can sometimes be felt as hard painless swellings on one or both sides. There are also similar spots or a number of fine granulations on the vagina, known respectively as "*colpitis maculosa*," and "*colpitis granulosa*."

Residual forms of endometritis also occur, in which gonococci are no longer present; this condition has been called by Menge "*endometritis chronica post gonorrhœica*."

The effect of gonorrhœal or other inflammation of the different organs in producing sterility varies greatly. Thus neither endocervicitis or endometritis need necessarily cause sterility. Chronic gonorrhœal endometritis, however, may lead to abortion by causing inflammation of the decidua.

Opinions differ as to the effect of inflammation of the tubes. Some authorities consider it a permanent hindrance to conception, while others hold that this is only the case when the abdominal ends of both tubes are occluded.

Another affection that nearly always leads to sterility is tubercular inflammation of the tubes; of twenty-four cases observed in Martin's Klinik, only one conceived after the advent of tubercle.

The great objection to most of the statistics as to the cause of unfruitful wedlock is that they are for the most part compiled from examination of one side only, viz., the women.

Kehrer was the first who inquired into the relative frequency of sterility due to men and that due to women. In 96 cases of sterility in which the semen was examined he found impotence in 3.12 per cent., azoospermia in 30.21 per cent., oligospermia in 11.45 per cent., and normal semen in 55.2 per cent. Next to azoospermia in the male (which is nearly always due to gonorrhœa) peritoneal adhesions around the internal genital organs in women, are the most common cause of sterility, and such adhesions, in the majority of cases, are also due to gonorrhœal infection.

Leier and Ascher point out that gonorrhœa in the male produces sterility in two ways, first by causing ozoospermia or oligospermia, and secondly by some of the men who have had gonorrhœa, but have not themselves been rendered sterile thereby, infecting their wives and making them sterile. They found in 227 cases of primary sterility that in 66 per cent. it was due to the man; while in 197 of secondary sterility they estimate the male sterility at 18.8—24.9 per cent. Vedeler gives the percentage of sterile men as 70, of women 30; and Olshausen estimates them as being 50 per cent. each.

Saenger's statistics are founded on 397 cases of primary sterility, in 110 of which both parties were examined. In these 110 cases he found that the male sterility amounted to 59.1 per cent. and the female to 40.9 per cent. Of 21 cases of secondary sterility, in which only the women were examined, it was found that the sterility depended in 24 per cent. on puerperal and in 43 per cent. on gonorrhœal infection.

We have left ourselves no room to go at any length into the question of treatment. Let it suffice to say that Schenk holds that it is unjustifiable to treat a woman

for sterility until it has been ascertained, by examination of the semen, that the husband is not sterile. This of course would diminish very considerably the number of women to be so treated in this country. As gonorrhœa is so frequently the cause of sterility its prophylaxis and cure become the chief factors in diminishing unfruitfulness.

Without, however, going further into this we hope we have said enough to induce all who are interested in this important question to consider carefully the facts put forward so lucidly in Dr. Schenk's book.

A SHORT PRACTICE OF MIDWIFERY, embodying the treatment adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, M.D., B.A.O., F.R.C.P.I., &c., &c., Ex-Assistant Master, Rotunda Hospital; Extern Examiner in Midwifery and Gynæcology, R.U.I.; Examiner in Midwifery, R.C.P.I.; late University Examiner in Midwifery and Gynæcology, Dublin University. With a Preface by W. J. SMYLY, M.D., F.R.C.P.I., late Master of the Rotunda Hospital. Fourth Edition, revised, with 152 illustrations, and an Appendix containing the statistics of the Hospital for the last thirteen years. Crown 8vo, pp. xxiv. and 558. London: J. and A. Churchill, 1903. Price 8s. 6d.

The third edition of this concise and practical exposition of obstetrics, published in 1901, we commended as giving due attention to all important points and omitting nothing essential. We are glad to welcome the fourth edition, issued just two years later, and to notice that the book has been further improved by revision, especially as regards the classification of the presentations in Chapter IV., and that of the forms of contracted pelvis in Chapter XXV., and has been brought closely up to date by additions in regard to the etiology of myxoma chorii, ectopic pregnancy, interstitial mastitis, and eclampsia; a passage

dealing chiefly with the so-called inanition fever (Holt) has also been added to the chapter on infant feeding.

The omissions from the text of the third edition are few and not important. An improvement that has saved some room is the altered position of some of the blocks, so that the parturient trunk lies across the page. New blocks have been furnished for some of the figures, and the slightly enlarged size of the book is due chiefly to the addition of some twenty-eight new illustrations, most of them explanatory of the course of labour in presentations of the vertex, face, brow, and anterior and posterior fontanelles.

Dr. Jellett does not seem to have essentially modified his views as to the treatment of eclampsia, though he mentions the good results to mother and child obtained by Leopold with Bossi's dilator; the advocates of immediate evacuation of the uterus are greatly strengthened by Professor Bumm's recent article (*ante* p. 98); but other operators have not been as successful as Leopold in avoiding laceration. Dr. Jellett himself prefers Frommer's eight-bladed modification of Bossi's instrument, as being less likely to cause laceration, and considers that it deserves a trial where the cervix has to be dilated in order to empty the womb in concealed accidental hæmorrhage or in other exceptional cases in which the dilatation of the cervix is necessary for the induction of labour.

We congratulate Dr. Purefoy on the statistics for the six years given; the mortality was 0·393, the morbidity 7·2 per cent.

DISEASES OF WOMEN. By ALFRED LEWIS GALABIN, M.A., M.D., F.R.C.P., late Fellow of Trinity College, Cambridge; Consulting Obstetric Physician to Guy's Hospital, &c., &c. Sixth Edition, much enlarged, with 284 illustrations. Demy 8vo, pp. viii. and 695. London: J. and A. Churchill, 1903. Price 16s.

We have had much pleasure in reading this book, partly because the principles enunciated, for the most

part, agree with our own, but more so because, as might be expected from an author of such distinguished scholarship, those principles are set forth in language far better than is commonly met with in medical, or, indeed, in general literature. It contains, moreover, on several points much fuller details than are usually given, and some recondite and even curious information. It is a remarkable instance of development, as even the second edition, published in 1881, contained barely 400 pages foolscap octavo, and though the present one approaches the size of a treatise, we cannot but think that complete rearrangement and rewriting would have given us a book more worthy of Dr. Galabin's great reputation.

GYNÆCOLOGICAL NURSING. By NETTA STEWART. Crown 8vo, pp. xii. and 174. Edinburgh: Oliver and Boyd, 1903. Price 2s. 6d.

It is refreshing to come across a book like this, written by an expert, and bearing upon every page the stamp of practical experience. The position of Miss Netta Stewart as Sister of the Gynæcological Wards of the Royal Infirmary, Edinburgh, is sufficient guarantee of her authority to write on the subject of gynæcological nursing, moreover, she very successfully avoids the error of attempting to teach gynæcology.

After a preliminary chapter on the preparation of patients for gynæcological examination, the author describes the various minutiae of what may be termed gynæcological toilette, such, for example, as the vaginal douche, the vaginal tampon, catheterisation, lavage of the bladder, &c. A number of useful chapters follow upon the duties of the nurse before, during, and after the ordinary operations of gynæcology, including those of curettage, perineorrhaphy, hysterectomy, and abdominal section.

When we add that an appreciative preface by Sir Halliday Croom is appended to this little work, that many of his maxims are plainly recognisable in its pages, we have

said sufficient to recommend this book not only to nurses, but to those surgeons and physicians who practise gynæcology, and who too often suffer from the assistance of a well-meaning but insufficiently instructed nurse.

We would strongly advise every gynæcologist to place this work in the hands of his nurses, young or old; even the most experienced will find in it many useful hints.

THE POCKET THERAPIST: a Dictionary of Disease and its Treatment; being a Concise Manual of Modern Treatment and an Aid to Memory, for Students and Practitioners. By THOMAS STRETCH DOWSE, M.D. Aberd., F.R.C.P.Edin. Third Edition, pp. 441. Bristol: John Wright and Co., 1903. Price 6s. 6d. net.

This little book, in a convenient form and well bound and printed, contains a very great deal of useful information, and as its republication shows, has been found a desirable pocket companion. But on inspection it seems more like a medical commonplace book than a concise Dictionary of Disease and its Treatment, though it is perhaps no less attractive reading on that account. As a lexicographer, the author should have known that "bulimia" (misprinted "bulima"), though a symptom met with in diabetes, does not mean "excessive thirst"; and the quotation, occupying three pages of the book, of an article from a weekly journal, interesting though it be, is hardly compatible with conciseness.

PUBLICATIONS RECEIVED.

We regret that we are compelled to postpone more complete notices of the following works :—

FROM D. APPLETON AND COMPANY, NEW YORK AND LONDON :

Gynæcology, a Text-book for Students and a Guide for Practitioners, by WILLIAM R. PRYOR, M.D., Professor of Gynæcology in the New York Polyclinic Medical School, &c., &c. Large demy 8vo, pp. xvi. and 380, with 163 illustrations in the text. 1903.

FROM J. F. BERGMANN, WIESBADEN :

Handbuch der Geburtshulfe, in drei Baenden, herausgegeben von F. VON WINCKEL in Muenchen. Erster Band, I. Haelfte; mit zahlreichen Abbildungen in Text und auf Tafeln. Royal 8vo, pp. xii. and 657. Price 13-60 marks.

FROM H. K. LEWIS, 136, GOWER STREET, LONDON, W.C. :

A Practical Treatise on the Diseases of Women, by ARTHUR H. N. LEWERS, M.D.Lond., F.R.C.P., Senior Obstetric Physician to the London Hospital, &c., &c. Sixth Edition, crown 8vo, pp. xviii. and 533, with 166 illustrations and 4 coloured plates (Lewis' Practical Series). 1903. Price 10s. 6d.

FROM REEMAN LIMITED, 129, SHAFTESBURY AVENUE, LONDON, W.C. :

Rest, Mental Therapeutics, Suggestion, by FRANCIS X. DERCUM, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia, &c., being Volume VIII. of A System of Physiologic Therapeutics, edited by A. Solis Cohen, A.M., M.D. Large demy 8vo, pp. viii. and 332. 1903. Price 12s. 6d. net.

FROM JOHN WRIGHT AND CO. (Simpkin, Marshall, Hamilton, Kent and Co., Ltd., London) :

Essentials of Pelvic Diagnosis, with Illustrative Cases, by E. STANMORE BISHOP, F.R.C.S.Eng., Hon. Surgeon to the Ancoats Hospital; and an Appendix on Examination of the Blood, &c., by CHAS. H. MELLAND, M.D.Lond., Hon. Physician to the Ancoats Hospital. Demy, 8vo, pp. xii. and 297, with plates and illustrations in the text. 1903.

Transactions of the North of England Obstetrical and Gynæcological Society, Fasciculi iii. and iv., 1903.

Transactions of the American Association of Obstetricians and Gynæcologists, Volume xv., for the year 1902. New York, 1903.

Ws have also to acknowledge the following Pamphlets and Reprints.

Sechs Kaiserschnitte, nebst Bemerkungen ueber die Stellung der Saenger'schen Operation zu der Porro'schen, von Professor Dr. ELIS ESSEN-MOELLER, Lund.

By EDGAR GARCEAU, M.D., of Boston, Ureteritis in the Female.

By CHARLES P. NOBLE, M.D., Philadelphia :

The Significance of the Temperature in the Diagnosis of Extrauterine Pregnancy during the Period of Collapse from Hemorrhage.

Preliminary Report on an Operation for Abdominal Pregnancy of Twenty-one Months Duration. Description of Specimen (of the same) exhibited at the College of Physicians of Philadelphia.

A Study of the Degenerations and Complications of Fibroid Tumours of the Uterus from the Standpoint of the Treatment of these Growths.

The Rôle of the Cystoscope in the Diagnosis and Treatment of some Diseases of the Urinary Tract.

Cystic Tumours of the Mammæ: their Removal by "Forcible Massage" without Incision, by HERBERT SNOW, M.D.Lond., Senior Surgeon to the Cancer Hospital.

Aids to Cystoscopic Practice, by FERD. C. VALENTINE, M.D., New York.

The Boy's Venereal Peril: Reprint from the *Journal of the American Medical Association*.

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THURSDAY, NOVEMBER 12, 1903.

HEYWOOD SMITH, M.A., M.D.OXON, PRESIDENT, IN THE CHAIR.

SPECIMENS.

MULTILOCULAR OVARIAN CYST OF SIX MONTHS' GROWTH.
WITH SOLID CONTENTS WEIGHING $22\frac{1}{2}$ LBS. By F. A.
PURCELL, M.D., Surgeon to the Cancer Hospital.

The specimen was taken from E. F., a married woman without any children, aged 33, who was admitted to the Cancer Hospital, September 22, 1903.

History.—Complaining of a tumour in her abdomen, causing severe throbbing pain. The tumour was first noticed at the end of last May, when it reached just above the symphysis pubis. It has been growing steadily since. The patient had been married eighteen months; she had a menstrual cycle of twenty-eight days, and a period of five days; much blood was lost at times of menstruation. She was regular up to the end of September, 1902, and then fourteen weeks elapsed before the menses returned. Immediately after this there was a "flooding" lasting for six or seven weeks, the discharge being thin, slightly blood-

stained, and extremely offensive, but unaccompanied by any other symptoms to cause her alarm; she did not then seek medical advice, nor take to her bed. The flooding ceased suddenly. Since then she had often had a loss of blood in addition to that of menstruation, and since January 1, 1903, she has seldom gone more than a week at a time without hæmorrhage. She has never passed anything larger or more remarkable than large clots. She is rather troubled with her micturition; as a rule, she has a frequent desire to make water, but sometimes she passes none for a whole day; there is nothing about the urine to call for note.

Her bowels were regular; according to her own story and that of her husband, she has lost flesh to a marked degree, but is not yet particularly emaciated.

Examination.—The abdomen is distended by a large tumour, which rises to within two inches of the ensiform cartilage; the percussion note is normal in the flanks and epigastrium, but it is dull all over the tumour which is hard and tense on palpation, but not uniformly so; at its summit there is a hard rounded prominence; below this and to the left there is a shallow depression, and still further downwards and to the left there is another markedly hard rounded prominence. Fluctuation is not evident, but when an assistant pressed with the edge of the hand in the mid-line, a smart tap on one side of the tumour gave an impulse against the finger on the opposite side. There is half an inch of difference in the measurements from umbilicus to the anterior superior iliac spines, the right being greater. No movements have been felt by the patient; no foetal heart sounds have been detected. Over an area of two inches in the line between the right anterior superior iliac spine and the umbilicus a venous hum is heard (the right ovarian vessels); the umbilicus is everted.

Vaginal examination reveals a soft œdematous cervix; drawn upwards, and filling the pelvis, there was a large tense mass, not to be differentiated from the uterus; the uterine sound was not passed.

The breasts, although there were dark areolæ round the nipple, were shrunk and small, and no milk could be expressed.

The patient was examined by the members of the staff of the hospital. Opinions differed and suggestions were made to postpone operation with the view of further developments ; the majority, however, ruled for intervention.

Operation.—She was duly prepared for operation, and on September 30, 1903, she was anæsthetised and brought to the theatre. A four-inch incision was made in the middle line below the umbilicus ; on exposing the tumour the ovarian vein and tube showed, the engorged vein coursing across the tumour upwards and outwards to the right. On inserting the examining hand, extensive omental adhesions were found, and solid masses were felt below and behind ; the tumour, indeed, presented the appearance of a huge sarcoma. The trocar was plunged in at a place where the wall was thin, and free of veins, but no fluid escaped ; a second thrust was made at another spot with the same result, the contents being too viscid to come away. Every effort to reduce the size failing, the abdominal wound was extended upwards to within a couple of inches of the tip of the ensiform cartilage, and the tumour was then turned out, the omental adhesions tied and separated, the pedicle tied with silk, the tumour released, and the peritoneal folds sutured over the stump. The uterus, small and rather elongated, lay towards the iliac fossa. During the toilet, and whilst the peritoneal edges were being sutured, some four pints of saline solution at a temperature of 105° to 108° F. were poured into the abdominal cavity. The incision was so long that the intestines could be seen floating about. The abdominal wall was closed by the three-layer method.

The patient bore the operation well, and did not suffer from shock. The tumour was of a multilocular cystic character, with very viscid contents.

The night following the patient passed an inordinate

quantity of water, no doubt caused by the four pints of the saline fluid poured into the abdomen during the operation; she made an uninterrupted and uneventful convalescence.

I am gratefully indebted for these notes and for the care of the patient to my house surgeon, Mr. Archibald Leitch, and for the following pathological report on the specimen to Messrs. Plimmer and Morgan, pathologists to the Cancer Hospital.

The tumour, which weighed $22\frac{1}{2}$ lbs., was a large cyst, with a solid mass of considerable size attached to one part of the wall. The cyst wall was smooth and showed no intra-cystic growths. Microscopically, the sections showed ordinary cystic growth lined with one layer of cells, and the main bulk of the more solid portion consisted entirely of degenerated material which would not stain, and in it there was very little that was cystic.

CYSTIC AND SCLEROTIC OVARIES REMOVED ON ACCOUNT OF
INTENSE AND PERSISTENT PAIN. By BEDFORD FEN-
WICK, M.D., Physician to the Hospital for Women,
Soho Square.

The two sections which I show, by means of the epidiascope, this evening have been made from the ovaries which I removed on October 28 from a patient in the Hospital for Women. She is a single woman, aged 27, occupied at home, and was first sent to me by Dr. Munshé about a year ago. She had then been under treatment for nine years for a persistent pain in both ovarian regions, but especially on the left side. This pain was accentuated for three days before and during each period. She described it, at its worst, as if she were being stabbed with a red-hot needle, darting through into the back and down the left thigh and leg into the foot. The pain in the right side, and as a rule also in the left, was described as of a dull, aching character. There was a frequent feeling of nausea,

and occasionally leucorrhœa. Otherwise, except that she had been losing flesh steadily for some months past, she made no other complaint. There was no apparent reason why she should simulate illness, and certainly the loss of weight, the increasing bodily weakness, and the frequently sleepless nights whilst she was under treatment in the hospital, were not traceable to any other cause than the constant pain of which she complained. On examination, the cervix was found to be small and the os somewhat smaller than normal. The uterus was in front, small but normal in shape. Both ovaries could be felt, the left slightly lower than normal, and both felt slightly harder and were apparently less sensitive, than usual. For nine years, then, she had been under constant medical treatment, going from practitioner to practitioner, while all the time the pain was steadily growing worse. She had been in two hospitals during that time, and in Charing Cross was curetted, but still obtained no relief. She had worn pessaries off and on without any beneficial result. She had taken many tonics and sedatives without any effect. Finally, as her health was evidently depreciating, I took her into my wards, and she was carefully dieted, blisters and other applications were employed, and tonics administered for five weeks. Still she continued to lose flesh and strength, and the sister and nurses were persuaded that she actually suffered the constant and sometimes severe pain which she described. As a last resource, then, at her earnest request to have something done for her relief, I performed laparotomy. Both ovaries were slightly enlarged, the left had slight adhesions around it, the right was quite free. A colleague who was assisting me agreed that the ovaries were, to all outward appearance, healthy; and certainly to the naked eye there did not seem to be any obvious disease. Still, remembering her ten years' suffering, her enfeebled general health, and the results which have followed in some half a dozen other similar cases, I removed both ovaries. The night after the operation she had no sleep

at all; the following night and ever since she has slept well; better, she says, than she has done for many years. Since the second day after the operation she has been entirely free from any pain. She rapidly regained her appetite, lost the sallow, haggard appearance she had before, and is now quickly gaining flesh.

So much for the clinical features. Mr. Eastes has been good enough to make very careful sections of the ovaries for me, and I am indebted to him for those which I will now show by the epidiascope. It will be observed that these ovaries, which seemed so healthy on the surface, are literally riddled with cysts, so that there is little ovarian tissue left. Moreover, the remaining stroma and the capsule itself appear to have undergone considerable condensation and thickening.

Mr. EASTES' report is as follows: "The larger ovary measures 4·5 by 2·25 centimetres, its long axis being parallel with the attached border. It contains thirteen cysts visible macroscopically; six of these are close to the periphery, lying in the true egg-bearing portion of the gland. The cysts, one and all, are due to distension of Graafian follicles. Under the microscope, the gland is seen to contain many more follicles in the initial stages of cystic change. The stroma which still remains is cirrhotic and parts are distinctly oedematous. The vessels of the hilum are markedly thickened, and everything points to impaired ovarian circulation. No healthy follicles, such as could be deemed capable of reproduction, could be found.

"The smaller nearly circular ovary has a diameter of three centimetres. It contains nine small cysts due to the distension of Graafian follicles. No normal follicles are found, but tiny circular and oval spaces devoid of any granular lining represent them. These lie in a very dense stroma. The density of this stroma is due to a cirrhotic change which is the outcome of chronic oöphoritis."

The case, then, is one of much practical importance to us as gynaecologists. We are exceedingly, and, of course,

rightly, scrupulous as to the removal of ovaries in which we cannot distinguish by the touch, or by the naked eye, evidences of gross disease. I can recall, during the last twenty years, some five or six other patients in whom, as a last resource, I removed both ovaries after they had undergone years of suffering, quite unrelieved by any treatment, and in whom the general health had become seriously impaired. In each case I found marked thickening of the capsule and cystic degeneration, and in every one of these cases the patient was at once and permanently relieved of her pain; in every case the general health began to improve at once; and in one case in which the sleeplessness caused by the pain had led to a complete mental breakdown, the patient was also cured of her maniacal attacks.

With regard to the pathology of these cases, in each instance I have observed that the Fallopian tubes appeared to be quite healthy, but that the uterus was somewhat abnormally small; and in one case, in which I obtained some good sections, the ovarian artery appeared to me to be certainly much smaller in its calibre than usual. If one accepts a fibroid thickening of the capsule as a feature of these cases, I suggest that it would explain the occurrence of cystic disease in consequence of the enforced retention of the Graafian follicles at each menstrual period, their development into cysts and the gradual destruction of the surrounding tissue by the pressure of such cysts. On the other hand, the thickened peripheral stroma and capsule may cause abnormal pressure on the ovarian nerves, and thus reflex irritation of the ovarian and hypogastric plexuses and of the sacral nerves. This particular patient, for example, could map out her sciatic nerve in tracing the course of the pain down the thigh and leg.

Finally, in the face of such cases as these, a practical question of much importance arises—whether, in fact, we are justified in permitting patients suffering from definite signs of ovarian nerve irritation to continue to suffer, year after year, without adopting radical treatment for their

relief. I fully admit the gravity of the question, but surely it is one which should be faced. I frankly confess that out of the hundreds of patients I must have seen with severe ovarian pains during the last twenty years, I have only had the moral courage to remove the ovaries in at most six cases, which I admit were extreme. But the results attained in those cases, and the pathological conditions shown in the present instance, make me doubt whether such strict conservatism is altogether justifiable.

Dr. INGLIS PARSONS said that he entirely agreed with the views expressed by Dr. Bedford Fenwick. Some years ago much obloquy was cast upon a well-known and esteemed surgeon in Liverpool for removing ovaries, as it was alleged, unnecessarily ; now unfortunately the pendulum had swung too much the other way, and the surgeon sometimes held his hand when it would be far better to remove the ovary. One had, of course, to be careful that the patient was not merely neurotic or hysterical, that her symptoms could not be attributed to the condition of her nervous system, but when that had been ascertained, and other treatment had had a fair trial, one was certainly, on the evidence of any enlargement of the organ, justified in removing the ovary.

Dr. R. H. HODGSON said that he was much interested in the case in connection with one he had brought before the Society last year in which the patient, in spite of treatment by various medical men and in hospitals, had been constantly suffering pain for seventeen years after he had first seen her, but from the day he removed the ovaries all pain ceased, and her recovery was complete. He had been somewhat reluctant to perform the operation, as in another case of the kind, some ten years ago, the pain did not entirely disappear, but the result in the one operated on last year had been most satisfactory.

The PRESIDENT thought they were indebted to Dr. Bedford Fenwick for bringing the case, and the condition of

things it exemplified, to their notice. He was sure that there were many cases of ovarian suffering in which the ovaries did not attain a size much larger than normal, as, for instance, in the two cases he had himself described at their last meeting, in which the ovarian stroma had been extremely dense. No doubt abdominal pain did sometimes persist after the operation, perhaps owing to the inclusion of a nerve in ligaturing the pedicle, but such pain, he thought, generally disappeared in time.

Dr. BEDFORD FENWICK said that he had hesitated to bring forward the case because, though he had met with numerous others of the kind, he had not had the moral courage to operate upon more than five or six. He thought Dr. Parsons was right in saying that the tendency now was at the opposite extreme to that of twenty years ago, and that the operation was now too seldom performed for the condition described. The patient in the case he had reported was only 27 years old; he had kept her under observation in the hospital for five weeks before doing anything; even at the operation both to Dr. Stevens and himself the ovaries seemed to the naked eye to be fairly normal, and it required some resolution to remove them simply on account of her sufferings; now, however, she was only dissatisfied because they had not been removed sooner.

The PRESIDENT showed, with the aid of the epidiascope, a section of the remarkable fibroid tumour with calcareous degeneration which he had brought before the notice of the Society at the last meeting.

CASES.

INCARCERATED IRREDUCIBLE FEMORAL HERNIA IN A WOMAN. By ROBERT HUGH HODGSON, M.D.

A lady, aged 48, the mother of four children, the youngest being now twenty-one, had suffered right femoral hernia for the last twelve years. She had worn a truss constantly.

Six years ago the rupture came down and was reduced by me, and a new truss applied. With the exception of occasional constipation and slight pains no inconvenience was experienced from the hernia until July 23 of the present year, when the patient found a swelling in her right groin about six inches long and two broad, running parallel with Poupart's ligament. She complained of pain and constipation, and said that the swelling had all come on that day. The symptoms increasing in severity the patient sent for me on July 27, four days later. Upon examination, it was evident that the hernia had again appeared and, becoming impacted with fæces, was causing obstruction. Trusting to the history that the whole of the swelling had occurred within the last five days, I tried gentle taxis, but as no alteration was thereby effected, and there was no impulse on coughing, I ordered that the swelling be covered with ointment and a crushed linseed poultice applied over the ointment. A gentle purgative was given at short intervals. With the exception of relief from pain, no improvement having taken place by the next day, I advised taxis under anæsthesia, and explained to the patient that should I fail then to reduce the hernia it would be necessary to operate. On the 29th chloroform was administered and taxis again tried, but without effecting a reduction. I therefore opened the sac and found the following condition: a knuckle of small intestine protruded from the crural canal, running straight down the thigh. On the inner side of this knuckle (that is to say, nearer the median line of the body) there was a pouch-like protrusion of the intestinal wall, about an inch and a half long, and on the outer side of the knuckle another protrusion about two and a half inches long, running outwards and upwards parallel with Poupart's ligament and quite free in its sac. The bend in the gut forming the knuckle and the protrusion on the inner side were, however, firmly adherent to the sac. The neck of the sac was united to the surrounding structures for nearly the whole of its

extent, the exception being the outer side of a small portion of the lower boundary. Here, then, arose my difficulty. What was the best course to pursue, to make an artificial anus, to open the abdomen and perform enterectomy, or to separate the two pouch-like portions from the sac and free the gut at the femoral ring? Having decided on the last course, I freed a small portion of the intestine from the sac with my finger, but found it necessary to dissect out the remaining intestine, leaving pieces of sac adherent to the gut. These pieces I pared off as closely as possible. Then with the end of a Stanley director I was able to detach some of the intestine from the ring, and completed the separation with my finger. After division of Gimbernat's ligament I found it still impossible either to draw the intestine down or to push it into the abdomen owing to the fact that it was adherent to the abdominal wall. Fortunately this attachment was not very firm, and gave way to digital pressure, and I was then able to return the gut into the abdomen. The ragged pieces of the sac having been cut away close to the ring, a purse-string suture was inserted round the edges of the opening, drawn tight, and tied. The lower border of Poupart's ligament was next stitched to the fascia covering the pectineus, and the wound closed.

The patient made a complete recovery, and the bowels act regularly and well. I have brought this case before you, believing it to be interesting for the following reasons: The patient's positive assurance that the hernia had been down only a few days; the extensive adhesions both in and outside the abdomen; the peculiar shape of the protruded bowel, which was that of an irregular cross; and the all-important question of the selection of operation.

Dr. PHILLIPS HILLS gathered that Dr. Hodgson had arrived at the conclusion that the hernia was irreducible; if so, was it safe to give even a gentle purgative? He

had always understood such treatment to be very doubtful, indeed, very dangerous.

Dr. HODGSON, in reply, said he had relied upon the history that the hernia had come down only a few days previously, and could not anticipate that he would find it all glued together. He had therefore felt justified in attempting to soften the motions in the hope of emptying and then releasing the bowel; he had not considered it irreducible until the operation.

RADICAL CURE OF A RECURRENT VENTRAL HERNIA. By
INGLIS PARSONS, M.D., Physician to the Chelsea
Hospital for Women.

This patient, a woman, aged 36, had for many years suffered from diseased appendages. In March, 1898, she was taken into one of the provincial hospitals and both appendages were removed, and soon after leaving the institution she noticed a swelling in the scar left by the operation. In September, 1898, she was readmitted, and the same surgeon operated on the hernia. In January, 1899, the swelling again appeared in the same place, and she then decided to come into the Chelsea Hospital for Women, and was admitted under my care in April, 1899.

On admission the patient, who was a strong, stout woman, was found to have a ventral hernia about the size of a large orange in the middle line between the umbilicus and the pubes. The separated edges of the muscles and aponeurosis formed a well-defined ring about three or four inches in diameter.

Menstruation had not ceased since removal of the ovaries, but had become irregular, sometimes profuse, at other times scanty.

On May 4 ether was administered, and with the assistance of Dr. Berkeley the abdomen was opened by a curved incision along the edge of the ring formed by the muscles and aponeurosis. This course was adopted because, as a

rule, either intestines or omentum are found to be adherent in the middle line to the scar left by the old incision. This case was no exception to the rule, a large piece of omentum was found adherent. This was tied with a catgut ligature and divided.

The sac consisting chiefly of peritoneum and skin was then removed. The fibrous tissue in the ring, which matted the layers of the abdominal wall together, was pared away until each layer could be distinctly made out and separated. The peritoneum was first united with a continuous fine silk ligature, and the cut ends were turned up into the wound, so as to avoid leaving a raw surface in contact with intestines or omentum. The muscular and fibrous layers were next united with interrupted silkworm gut sutures. As these are the most important in preventing hernia, and are left buried, great care was used to ensure that fascia and muscle were accurately brought together on each side. The skin and subcutaneous tissues were next united by interrupted silver wire sutures.

The temperature remained normal after the operation, and she made an excellent recovery. I heard from the patient November, 1900, eighteen months after the operation, and she keeps quite well, and is able to earn her living by acting as an insurance agent, which entails a good deal of bicycle riding through the country.

Remarks.—At the first two operations the patient tells me that the abdominal incision was united in a single layer. As she is a very intelligent woman, and received her information from the nurse, I have no reason to doubt it. My own success I attribute entirely to sewing up in three layers and using buried silkworm gut for the muscles and aponeurosis.

The difficulties in these cases are, first, the adherence of bowel or omentum to the old cicatrix; this is met by avoiding the middle line and making a curved incision to the side; the flap can then be separated with ease; and secondly, the matting together of all the layers round the

edge of the ring. This is met by removing the fibrous tissue from the ring and by prolonging the incision a little above it, so as to get into the normal layers as they are found on first opening the abdomen.

In reply to a question of the President, Dr. Parsons said that the hernia had occurred twice. The patient had been operated upon for it in the hospital in which the abdominal section had been done to remove her appendages; the hernia recurred in the same spot within three months, and it was for the recurrence he had operated. It would have been very difficult to separate the layers of the abdominal wall, which were, as usual, firmly matted together, had he not cut away the whole of the fibrous ring; he was then able to find and unite the layers, as after an ordinary section of the abdominal wall for the first time.

BRITISH GYNÆCOLOGICAL SOCIETY.

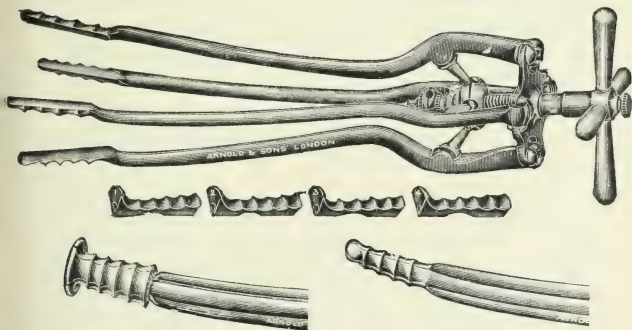
THURSDAY, DECEMBER 10, 1903.

HEYWOOD SMITH, M.D., PRESIDENT, IN THE CHAIR.

EXHIBITS.

BOSSI'S DILATOR.

Dr. MACNAUGHTON-JONES showed the modification of Bossi's dilator, by Preiss, comparing it with the instrument he had exhibited a few years since in the Society.



Blades closed with caps on.

Blades closed without the caps.

PREISS' MODIFICATION OF BOSSI'S DILATOR.

and pointing out its lightness, greater ease of application, &c. Having reported on and used the dilator for the first time in this country, he would not apologise for exhibiting this improvement on the one he had then shown.

The lacerations of the cervix recorded by some authorities abroad he could not help thinking were due to too rapid dilatation and to the employment of the dilator in unsuitable cases.

Dr. MACNAUGHTON-JONES, jun., said that he had used this improved form of Bossi's instrument in a *terti-para* in whom it had been necessary to induce premature labour between the seventh and eighth month on account of a large fibroid. There was difficulty in securing sufficient dilatation for the forceps. As he was able to pass his finger easily into the os, he introduced the instrument with the caps on, and he spent half an hour in dilating the cervix. The operation was performed at seven o'clock, and the child was born at eleven. No laceration occurred.

Dr. R. H. HODGSON pointed out that laceration of the cervix was especially likely to happen when the amount of fibrous tissue in the part had been increased by processes of chronic inflammation. Under such circumstances the laceration was not to be attributed to any fault inherent in the instrument.

Dr. MACNAUGHTON-JONES exhibited with the epidiascope sections of

AN ISOLATED DUCT CANCER IN AN AXILLARY GLAND, and read a final report furnished by Dr. Cuthbert Lockyer. Previous sections had not exhibited any malignant characteristics. The breast was then cut into several sections, and from these six different portions were examined, with the following further results:—(1) Some of the ducts are atrophied, and their epithelium is shrunken and degenerated. (2) There are numerous small cysts, produced by involution changes in the ducts. Some of these are filled with epithelial *débris*. (3) Fibrous processes lined by epithelium project into some of the above cysts. None of them are branched, but they constitute an early stage of intracystic papillomata. (4) The epithelium in some

of the dilated ducts has proliferated and is arranged in layers, several coils in thickness. This indicates an early carcinomatous change, and accounts for the secondary deposit of cancer found in the enlarged left axillary gland.

Dr. MACNAUGHTON-JONES said that this explained what otherwise would have been a pathological mystery. It also proved that superficial examinations of the mamma might give negative results, and carcinoma still exist in deeper portions. The gland in this case weighed over three pounds, and was infiltrated all through with fatty tissue, making the search more difficult.

Dr. R. H. HODGSON, referring to the specimens of sclerosed ovaries, remarked that the covering of cirrhotic ovaries was always thickened. Though such thickening must in the first instance arise from congestion, it was remarkable that the congestion was not always followed by cirrhosis. This might be due to the fact that in some instances the capsule of the ovary yielded to the increased blood pressure, while in others it did not do so. The question, therefore, arose whether, when great suffering resulted from cirrhotic ovaries, incision of the capsule might not relieve the distress.

Dr. J. J. MACAN said that several specimens of diseased ovaries had lately been exhibited at the Society, which had been attended with very similar clinical symptoms, and which closely resembled one another in appearance, but some had been described as cirrhotic and others as sclerotic. Unless there was an essential difference between the two conditions which it was desirable to emphasize, it seemed to him that it would be better, especially in regard to the reports of the proceedings, to use one term rather than two. He believed that every abnormal increase in the fibrous tissue of an internal origin was liable to be followed by contraction.

Dr. MACNAUGHTON-JONES said that the different specimens of which he had shown sections by the epidiascope were clearly not taken from what he regarded as true

“cirrhotic” ovaries. In the latter there was distinct contraction of the capsule and cicatrisation with shrinking of the tunica and connective tissue in the stroma, with obliteration of the follicles. Occasionally there were small pus cavities. Of course, such hardening of the ovary involved the process of sclerosis. In the sections shown by him the ovaries were rather hypertrophied than reduced in size, but there was a process of sclerosis proceeding throughout the stroma, and involving all the structures from the capsule inwards. The practical point was that such ovaries caused great suffering, and, clinically, were often regarded as free from disease.

The PRESIDENT said that the question was one that might well be discussed at some future meeting, as it was desirable to have a clear understanding upon it.

In connection with the other specimens he exhibited, Dr. H. MACNAUGHTON-JONES read the following notes:—

I.—RIGHT AND LEFT SALPINGO-OÖPHORITIS, WITH PUS
CYSTS OF OVARIES

The patient from whom the adnexæ shown were removed had been married for twelve years. There were two children at full term, and two miscarriages. Her last pregnancy was nine years since. Uterine hæmorrhage commenced about two years ago, and occasionally was very excessive. This was associated with great pain in the left side and over the sacrum. Offensive clots were passed occasionally, and after these watery discharges. Seven years since the uterus had been curetted. At the time of operation, on October 19, she was very weak and walked with difficulty. At operation, a cyst about the size of an orange was found in Douglas’s space at the right side, with a very enlarged and dilated oviduct, and at the left side an enlarged and diseased ovary with a correspondingly thickened tube. At both sides the adnexæ were buried in plastic lymph. The pus sac ruptured on the point of delivery, but very little pus escaped into the abdominal cavity. After removal

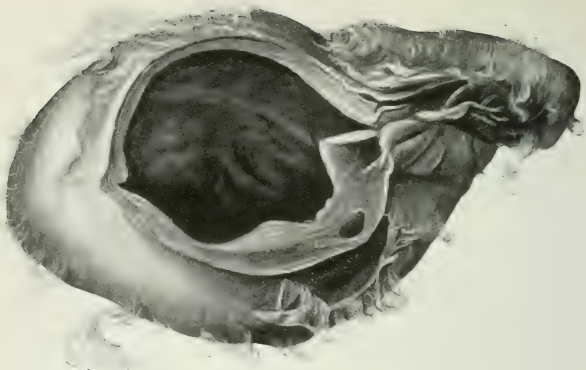


FIG. 1.

Large right ovarian pus sac with the portion of the tube opening into the sac—both ovary and tube were embedded in adhesions. For the macroscopical description of the tube see p. 299.



FIG. 2.

Smaller left cystic and gyromatous ovary with sclerosed capsule with the cystic tube removed from the same patient, pp. 299-300.

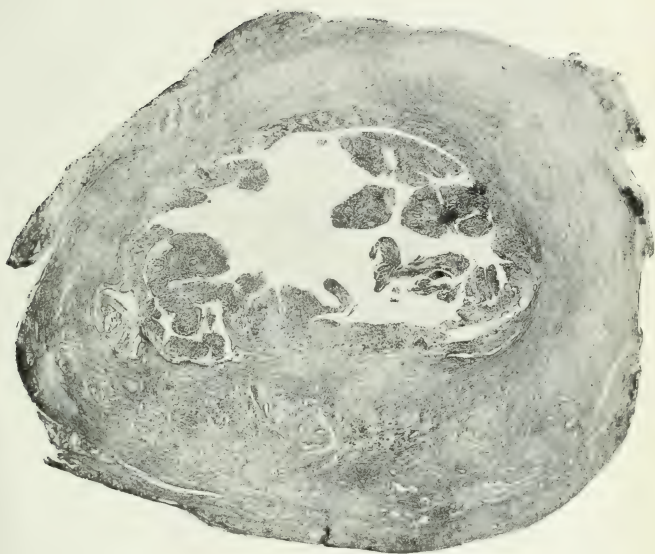


FIG. 3.

The section of the large tube (Fig. 1., magnification 8 times).

of the adnexæ the pelvis was freely mopped out with swabs wet with formalin solution. The tubes had the appearance of tuberculous salpingitis, and the associated pus cyst made him suspicious that the trouble might be of tuberculous nature.

The pathological report of Dr. Cuthbert Lockyer is interesting. Opening into the inner and upper aspect of the cyst is the tube. It is much thickened, measuring 2 cm. in thickness at its cut extremity. The cyst wall is studded with what to the naked eye look like small yellow papillomata, about the size of a pin's head. The cyst wall contains loculi, probably the remains of Graafian follicles, and it varies considerably in thickness, from 1 cm. to 0.3 cm. Externally are seen ragged adhesions of organised lymph. The smaller tube has a pervious abdominal ostium, near to which is a cyst the size of a filbert nut; this proceeds from the lower attached margin of the tube. The latter is thickened, but to a far less degree than its fellow. The corresponding ovary measures 3.5 cm. in the vertical, and 3 cm. in the transverse diameter. Its surface is puckered and covered by organised lymph. In the large tube (the one attached to the ovarian cyst) the mucosa is nearly entirely replaced by granulations, only a few columnar tubes being left to represent plicæ. Under the peritoneum are seen granulomatous-looking areas, circular and oval, consisting of round-celled infiltration surrounded by a fibrous capsule. The entire musculo-fibrous wall is infiltrated and the vessels contained in it have thickened walls. No giant-cells are seen.

The smaller tube shows plicæ which are swollen by leucocytic infiltration; the mucosa between the plicæ is also infiltrated in like manner. There are no subperitoneal deposits, but no doubt this tube shows the same process as that seen in the larger one, only in a much earlier stage. No giant-cells are seen. The small ovary shows marked sclerosis of its capsule, and one or two follicles filled almost completely with involuting lutein cells and fibrin. Others

show gyromatous and hyaline changes. The wall of the large cyst shows some remaining ovarian stroma, considerably changed by the deposition of inflammatory fibrous tissue. Its lining is composed of papillary swollen granulations, showing that the "cyst" was practically an abscess-cavity. In these granulations no evidence of tubercle is seen by the ordinary stains. Dr. Eastes has carefully examined sections of the tubes, stained by the Ziehl-Neilsen process, for the *B. tuberculosis*, and failed to find any bacilli. The patient made an excellent recovery.

II.—PERITUBAL HÆMATOCELE—EARLY TUBAL GESTATION.

The adnexæ were removed from a lady, aged 29, who had been married for seven years: a nullipara. Catamenia had been regular until six weeks before the operation, when she missed a fortnight. She was then attacked by pain in her right side. At the end of fourteen days the catamenia appeared, and hæmorrhage continued until the date of the operation, November 17. The discharge was rather offensive, and very dark in colour. The pathological report is as follows:—

On examination an adnexal swelling was found filling Douglas's pouch. The uterus was fixed. Immediate operation was decided upon.

The preparation mounted for the museum consists of a distended left Fallopian tube to which is attached along its lower border part of the wall of a hæmatocele sac.

The above tube measures 7 cm. in length. At its uterine end it is normal in size, but it at once begins to enlarge gradually into a dark-coloured cyst with thin walls.

The distended part of the tube occupies the outer four centimetres, and its diameter measures 8 cm. The ostium abdominale, owing to a twist in the ampulla of the tube, faces downwards and inwards, instead of directly outwards. It is patent, sufficiently so to admit a crow-quill. When

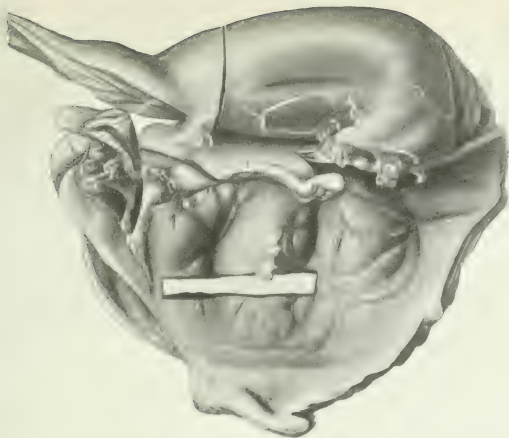


FIG. 4.

Right peritoneal hæmatocele (with the posterior wall of the sac). The anterior wall was incorporated with the broad ligament. The window was cut into the ovarian stroma. The distended tube is seen above, the section of which, for the purpose of examination, appears at the inner pole. The ovary was flattened out on the back of the sac, and was diagnosable only on section.

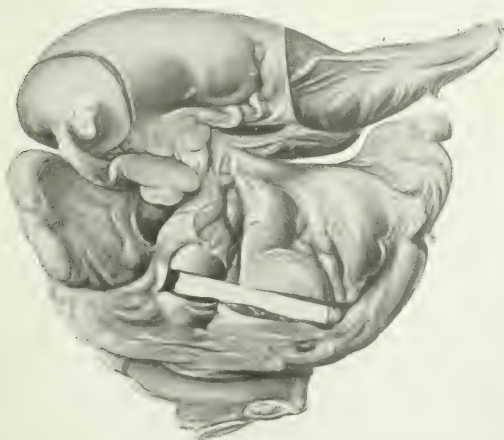


FIG. 5.

Shows the inner surface of the wall of the sac and ovarian stroma. The entire hæmatocele sac was removed in the manner described in the text. The section seen at the outer extremity of the tube was made for the purpose of examination, pp. 300-301.

the hæmatocele sac was intact the ostium opened directly into it in the usual manner of a peritubal hæmatocele.

The hæmatocele sac contains ovarian tissue. The ovary has in fact been flattened and spread out on the back of the sac and has become incorporated with the adventitious fibrous tissue to such an intimate degree as to be diagnosable only upon section. A window has been cut into the ovarian stroma and the tissue which was removed from the oblong gap seen in the photo, shows unruptured Graafian follicles, one of which contains a degenerate ovum, it also shows the remains of corpora lutea and much dense ovarian stroma.

The blood clot which was removed (during the operation) from the hæmatocele sac, weighed half an ounce after hardening. It contains no chorionic villi. The dark thin-walled tubal swelling has been cut through at its uterine and at its ampullary extremities. Discs of tissue, including the entire transverse section of the tube at these two levels, show that the lumen is occupied by blood-clot, which contains degenerate fibrolic chorionic villi. No decidual tissue is apparent. The plicæ are much flattened out, but they are covered by intact cubical epithelium.

The amount of hæmorrhage has been too free to show any sign of a capsularis around the implantation of the ovum.

Diagnosis.—This is obviously a case of primary tubal gestation with attempted abortion. None of the gestation products escaped through the ostium, but the hæmorrhage therefrom was gradual enough to allow of the formation of a peritubal hæmatocele. At the time of removal, the gestation products in the tube were reduced to a carneous molar formation, with total suppression of the amniotic sac.

The photo shows the tube and posterior wall of the sac, the anterior wall was so incorporate with the posterior layer of the left broad ligament that it could not be removed entire and is therefore not represented.

III.—SECOND CÆLIOTOMY ; CYSTIC AND ŒDEMATOUS OVARY
WITH THICKENED AND ADHERENT TUBE REMOVED, AND
RETROVERTED UTERUS VENTROSUSPENDED.

A patient, single, aged 31, had suffered for years from sensitive and painful adnexæ, with partial displacement of the uterus. Two years previously she had oöphorectomy performed, and a large cystic ovary was removed. Relief only lasted for a few months after the operation, the old symptoms recurring, the enlarged uterus being retroflexed, and the other ovary becoming cystic. An abnormal discharge now occurred from the uterus, and the old symptoms of pain with back-ache increased, notwithstanding rest and treatment. It became necessary to operate again. The ovary was found to be cystic and much enlarged, the Fallopian tube being fixed by adhesions. The uterus was also bound down by adhesions. Ventrosuspension was performed by doubling the round ligaments on themselves at the uterine ends, and thus suspending the uterus from the peritoneal and subperitoneal fascia.

The specimen consists of ovary, mesosalpinx, and the distal end of the Fallopian tube.

The ovary measures 5 by 3 cm. Its maximum circumference measures 8 cm. Its outer surface is roughened by delicate adhesions of lymph, and is deeply puckered. Between the sulci small bulging cysts are seen, and there is a laceration through a fairly recent corpus luteum. The gland has been split through its long axis. The cut surface shows a corpus luteum measuring 2 by 1 cm. There is also a small cyst, measuring 1·5 by ·5 cm., lying close to the corpus luteum. The stroma looks œdematous; it is very pale from immersion in spirit. The mesosalpinx contains a small thin-walled cyst immediately beneath but distinct from the tube; it measures 1·2 by ·6 cm. The portion of tube measures 2 cm.; it is slightly thickened. The ostium admits a bristle.

IV.—SCLEROSIS OF OVARY WITH NODULAR SALPINGITIS.

The patient, aged 34, married eleven years, five pregnancies; no miscarriages; last labour thirteen months

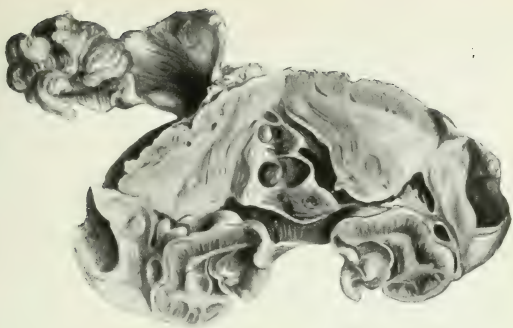


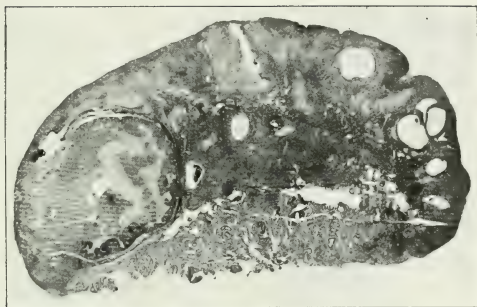
FIG. 6.

Edematous, sclerosed, and cystic ovary, with portion of attached tube removed by a second celiotomy. [The ovary had shrunk from immersion in formalin before the pathological report, p. 302, was made.] There were perimetric adhesions fixing the ovary, tube and uterus, p. 302.



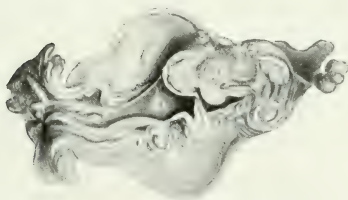
FIG. 8.

Section of portion of myoma showing central area of calcification, the result of hyaline degeneration; small, isolated, calcareous particles were scattered throughout the hyaloid area, p. 303.



SECTION OF OVARY.

(Enlarged to twice the natural size.)



NODULAR FALLOPIAN TUBE.

FIG. 7.

Sclerosed ovary, with thickened capsule; stroma studded with minute cystic cavities; obliterated follicles and corpora lutea represented by fibrous tissue; vascular walls hypertrophied and muscular tunics thickened. The tube is nodular—its walls are greatly thickened and the plicæ swollen and cedematous. At the May, 1903, meeting of the Society sections of similar ovaries with more advanced cirrhotic changes were shown, p. 302.

since. For five years had had constant pain in the left side and left leg. Of late had been unable to walk, and her general health had failed. The ovary which was removed presented through its entire extent sclerotic degeneration.

The capsule was thickened. The stroma was studded all through with cystic cavities, the remains of Graafian follicles and corpora lutea. Areas of modified fibrous tissue represented the latter; there were round-celled exudation of the stroma and thickening of the tunica albuginea. The walls of the vessels were seen greatly thickened, their appearance somewhat similar to the condition seen in arterio-capillary fibrosis of the kidney. There were no adhesions of ovary or tube.

The tube was typically nodular in appearance, and measures 4 cm.; its uterine cut end is normal in size, its proximal end, one centimetre; it then enlarges and becomes very tortuous, its maximum circumference measuring 3 cm. It has been split down the middle along the whole of its dilated part, and on section all the constituent parts of its walls were thickened, the muscular layer swollen and the plicæ œdematous, while the fimbriæ were fleshy and also swollen. There were no areas of caseation. The points referred to were illustrated by the epidiascope.

V.—CALCAREOUS DEGENERATION IN CENTRE OF MYOMA.

The tumour removed by myo-hysterectomy showed in section a central area of calcification, in the centre of which was a small calcified mass.

Within a hyaline patch some thick-walled vessels containing organised blood clot are seen. A hard nodule from another part of the growth has been decalcified and examined. It shows that the calcareous deposit has been laid down in parts of the fibroid which have previously undergone the hyaline change above referred to. Such hyaline degeneration is likewise associated with the calcification present in some forms of carcinoma.

All these cases made uneventful recoveries.

The specimens were all prepared at Mr. Eastes' laboratory, and reported on by Dr. Cuthbert Lockyer.

Dr. BEDFORD FENWICK showed

A FIBROID UTERUS,

and remarked: "The specimen which I now show is, in several respects, of much practical interest. It consists of a uterus containing fibroid growths, three of which have projected into its cavity. I removed it last Tuesday at the Hospital for Women, Soho Square, from a patient aged 50, married at twenty-two, who has had eight children, the last having been born eight years ago. The catamenia began at the age of twelve; since she was thirty years of age the losses have been more profuse; for the last six years she has noticed an increasing swelling of the abdomen. She was told that she had a tumour, but that this would get quite well and disappear at the change of life. For the last four years the swelling has much increased, and the losses have been extreme, at times exhausting her completely. But still the same cheerful and hopeful prognosis was given to her. For the last two years, she has had almost constant loss, and for the last few months greatly increasing abdominal pain. Finally, having arrived at the age of fifty, and finding her hopes of cure still deferred, she came to the hospital, and was immediately ordered into the wards. The uterus was enlarged nearly to the level of the umbilicus, with outgrowths filling the pelvis. It was nodular and apparently fixed. She was very blanched, her heart's action quick and irritable; she was extremely wasted, and seemed, in fact, to be in the last stage of exhaustion. Her first cardiac sound at the apex was fairly good—clear and distinct—and I therefore determined to operate.

"Incidentally, I should be glad of this opportunity to say that I am largely guided now in the performance of any abdominal operation for the removal of a tumour by the condition of the first heart sound, for this simple reason, that when it is clear and sharp there is rarely much, if any, fatty degeneration of the ventricular wall, and, as I have

on several occasions pointed out, it is that particular degeneration of the heart which is most often associated with long-standing abdominal tumours which causes the sudden death known to occur in these cases, or which brings about the collapse of the patient after laparotomy has been performed. That this is a good practical working rule I think I am entitled to claim, because during the last nineteen months I have not lost a single case after an abdominal operation, either in hospital or private practice.

“Returning to this patient: on opening the abdomen, I found the uterus fixed in the pelvis, densely adherent behind to coils of intestine, with this large cystic ovary twisted back and firmly adherent to its posterior wall, and with the appendix and several inches of the cæcum firmly adherent to the right side of the growth. It was impossible to get at these adhesions; I therefore tied off the right and left ovarian arteries, tore down the left broad ligament, stripped off the bladder in front, tied the left uterine artery, cut across the cervix, picking up the right uterine vessels in the stump; I was then able, working from below, to peel off the intestines from the uterine wall on the right side and remove the growth. The patient has recovered quickly and well from the shock of the operation, which took nearly an hour and a half to complete, as the floor of the pelvis bled considerably from the dissection necessary for the removal of the tumour.

“The points to which I would direct special attention are, first, that this is an excellent example of the extreme suffering and danger which patients even in this twentieth century are allowed to undergo, because of the archaic superstition that fibroids will always disappear at the menopause. The sooner we, as a profession, awake to the fact that the greatest danger of fibroids, either from extension or from degeneration, arises when the patient reaches the climacteric age, the better will it be for our own reputations, and for the safety of such patients. My second point is that the specimen is a most excellent illustration

of the manner in which hæmorrhage occurs when fibroids press in or are extruded upon the canal of the uterus. Here are two large polypoid growths pressing down upon a third, thus causing its necrosis and the rupture of its vessels. Thirdly, the specimen illustrates the important fact to which I have previously called attention, that disease of the ovary is probably most frequently due to interference with the vascular supply of the organ. Here it will be observed that the left ovary, which was free, was entirely normal in structure. The right ovary, jammed down behind and fixed to the uterus, and its blood supply therefore greatly interfered with, is completely degenerated, and consists merely of about twenty large blood cysts."

THE TREATMENT OF DYSMENORRHŒA AND STERILITY, DUE TO STENOSIS OF THE CERVIX, BY INCISION. By BEDFORD FENWICK, M.D., Physician to the Hospital for Women, Soho Square.

Dysmenorrhœa and sterility are perhaps two of the most common complaints for which women seek medical advice. When these symptoms exist separately they may be due to many causes; when they are associated they result most frequently, I believe, from a congenital or a traumatic constriction of the canal of the cervix uteri. However acquired, there is thereby produced a definite mechanical obstacle to the egress of menstrual blood and the ingress of seminal fluid.

All gynæcologists have seen examples of what I may term traumatic stenosis, where, after a difficult labour, the woman has, perhaps for the first time, commenced to have severe menstrual pain, and has not conceived again, and where on examination we find a hard cervix with small contracted orifice, while inspection shows dense cicatricial tissue where labour has evidently lacerated the cervical lips. These cases are equally amenable, I find, to the treatment I am about to describe; but, as they are comparatively rare, I will restrict what I have to say to the more common

or congenital form of stenosis of the cervix. And as that condition is relative—the narrowing being much more marked in some cases than in others—I would again restrict the field by explaining that I will chiefly refer to the condition known to us all as a “conical cervix.” It is, in fact, abnormally long, often measuring an inch to an inch and a half, or even more. It tapers downwards, and therefore the external orifice is almost invariably so small that it is described in the older text-books as the “pinhole os.” This is, in fact, so contracted that it is often impossible to pass an ordinary uterine sound through the opening, and when a surgical probe is introduced it is found to be tightly gripped along the whole length of the cervical canal. With regard to the dysmenorrhœa in these cases, this almost invariably begins one or two hours before the menstrual flow is observed, and becomes gradually worse until the loss is established. It is often associated with clotting of the menstrual blood, and the passage of each clot through the contracted canal causes exacerbation of the pain. Although certain distinguished writers have denied that the pain is due to obstruction, I must confess that, to my mind, the mechanical cause of the dysmenorrhœa appears to be self-evident. When one remembers that behind the contracted cervix there is a distensile cavity in the shape of the uterine canal, and great propulsive power in the shape of the uterine walls, surely it requires equally little knowledge of physics or of physiology to realise that pain must be experienced at the point where there exists sufficient obstruction to cause uterine contractions to secure the passage of the uterine contents. This natural effort at distension of a closed canal is accepted, indeed, as an obvious explanation of the pains in the first stage of labour; so that it is difficult to understand the grounds upon which the mechanical theory is disputed in these cases of cervical stenosis.

Passing, however, from theory to practice, I would first call attention to the historical fact that for quite fifty

years operative treatment of some kind or other has been employed to remove this contraction of the cervical canal in the hope of curing the associated menstrual pain. Half a century ago, it was the custom to pass a bistoury up the cervical canal and incise what is called in the text-books the internal os. In the great majority of cases so treated, the benefit, if any, was found to be entirely temporary, and the operation fell into disuse, the more so because in not a few patients such extreme and furious hæmorrhage occurred—probably from the opening of some branch of the uterine artery—that they narrowly escaped with their lives. Then came the method of introducing tents of compressed sponge, laminaria, and so forth, which caused dilatation of the canal, but, of course, extreme and continuous pain; and in not a few cases septic absorption was followed by pelvic cellulitis. At the best, the dilatation was never permanent, and, in due course, that treatment also fell into disfavour. Then came the more modern, and certainly more cleanly, treatment by glass or galvanic stems, solid or hollow, which were worn for weeks by the patient, and which certainly, in some instances, resulted in permanent softening and dilatation of the cervical canal. But on the other hand, the constant irritation and pressure often induced inflammatory troubles in the uterus or in its surrounding cellular tissue, so that, I suppose, at the present day this treatment is rarely adopted. Finally, there came into vogue the practice of dilating the contracted canal by means of graduated metal sounds; and, in patients who were averse to any more radical operation, there can be no doubt that the passage of three or four of these sounds—Numbers 6, 7, 8 and 9 being usually employed—and their retention for some ten minutes, resulted in a temporary dilatation, and when the procedure was adopted just before the menstrual period, the pain was often alleviated. Unfortunately, however, such dilatation is of course quite temporary in its duration. The constant tendency of the tissues is to contract at once, and therefore

the treatment must be repeated again and again. This fact led to a modification of the old cutting operation; the lips of the cervix were incised on both sides for a certain distance up the canal. The great difficulty always met with was that, performed with antiseptic precautions, there is left a perfectly clean cut, the lips of which naturally fall together at once, and the upper angles of which immediately unite. To prevent this rapid union, many methods have been tried. The divided lips were plugged, but the result of the irritation, of course, was to set up granulation, and the moment the plug was removed those granulations fell together and immediately coalesced. Caustics were applied to the cut surfaces to prevent their immediate union, but the only effect of these was to stimulate the growth of granulation tissue, and once again to cause sooner or later the growing together of the severed surfaces. In short, whatever method was adopted, the result in nine cases out of ten was that in six months, or perhaps less, the severed lips of the cervix had reunited. And not only was the canal again contracted, but, as the new tissue was thicker and cicatricial, the degree of contraction was often greater, and the resistance of the cervical tissue to expansion was increased; so that the latter condition of that patient was probably worse than the first. Still, it occasionally happened that the lips healed separately and apart, leaving a perfectly patent cervix, and the relief experienced by such patients was so great and so permanent that it not only established the usefulness and the scientific advisability of treatment by incision, but it prevented the method from falling entirely into disrepute and disuse. Some years ago, a succession of patients of some social importance, suffering from dysmenorrhœa and sterility, led me to study the subject somewhat carefully. The clinical facts, to which I have briefly alluded, seemed to point conclusively, not only to the mechanical nature of the obstruction in these cases, but also to the obvious argument that the patients could only be cured by remov-

ing that obstruction. One remembered how commonly lacerations of the cervix occur during labour; and how these, in most cases, close up completely; while in others, the lips remain widely separated, and heal in that condition. Further thought and inquiry led me to find that the former cases occurred most frequently when the patient was in perfect health, and had received the best possible surgical and nursing care; when there was comparatively little discharge from the uterus, and when douches were so regularly employed as to keep the entire genital tract, and especially the wounded surface of the cervix, in a surgically clean condition. On the other hand, I found that the widely-separated lacerations of the cervix were very common among hospital out-patients, where the uterine discharges had been by no means aseptic, where the patient's health was depreciated, where cleanliness, in fact, was too often only conspicuous by its absence. In short, whenever there is an unhealthy discharge from the uterus after the lips of the cervix have been torn, as one might almost expect, the wounds bathed with this discharge will not unite, but will separately heal. It was therefore plain that, in the case of a surgical aseptic wound, Nature would give no assistance in keeping the edges of the wound apart, but would devote all her efforts to drawing them again together in order to repair the injury which surgery had caused.

It therefore seemed to me that the only possible method of preventing immediate adhesion between the incised cervical lips was to draw one entirely apart from the other whilst the healing process was going on. I first attempted to effect this by means of a catgut stitch passed through the tip of the anterior lip and then higher up on the anterior vaginal wall, a similar stitch being passed through the posterior lip and the posterior vaginal wall, so that when these were tied the lips were dragged apart. But after a few hours the catgut softened, the lips fell together again and united in the ordinary manner; and so I adopted,

and have now for some years practised, the following method, which is simple, surgical, and has proved to be perfectly effective.

I had not previously heard of the operation being done by anyone else, but I have shown it now for some years at the Hospital for Women, and am glad to hear that it has proved equally successful in other hands.

The patient being anæsthetised and in the lithotomy position, the vagina is well douched and cleansed. The posterior wall of the vagina is retracted by a weighted speculum, a double hook is passed through the anterior lip of the os, and the cervix is drawn down. The cervical canal is then dilated by graduated metal sounds up to No. 16 or 16½; one blade of the scissors is then passed half-way up the cervical canal—that is to say, in many of these cases of conical cervix, from half to three-quarters of an inch—and an incision is made to that extent on each side; the posterior lip falls back, the anterior lip is drawn forward with the hook. A small needle threaded with strong catgut is passed through the left side of the anterior lip close to the upper angle of the incision, and then across and through the corresponding point on the right side. The catgut is cut sufficiently short, and a similar stitch is inserted about midway between the former and the tip of the cervix. The anterior lip is sponged clean of blood, and first the upper, and then the lower, stitch is tied. The result, of course, is that the anterior lip of the cervix is indrawn together—the raw surface being closed completely, whilst the posterior lip is left flat and open. Two or three wool plugs are then applied tightly against the cervix to check hæmorrhage. These are removed in about sixteen hours, and then it is found that the posterior lip is glazed over with lymph and quite dry. In about a week, it is covered with mucous membrane extending up to the angle of the wound. Meanwhile, the catgut in the anterior lip is gradually softening, and, as a general rule the wound gapes open, while at the same time it is

becoming glazed over with mucous membrane. At the end of ten days I cut the catgut stitches and remove them, and then the anterior lip flattens out and lies nearly in its normal position, but with this difference—that both the opposed surfaces being covered with mucous membrane they cannot adhere together; and, on passing the finger, one finds that the cervix is widely patent. As a rule there is no discharge, and at the end of a fortnight the patient is able to resume her home life.

For the purposes of this paper, I have looked up my notes of all the hospital and private cases I could remember for whom I have performed this operation. They amount altogether to eighty-seven cases. In every case my notes show that the first period after the operation was practically free from pain. In twenty-eight of the cases I have a note of the patient at the end of two years, and in every one of those cases the relief had been permanent for that time. In another thirty-three cases my notes only extend to an average of eleven months after operation, and in each of these the relief was equally definite. Of the remaining cases, in ten I can only find a note for three or four months after the operation, and in those again the relief so far had been permanent. In eight cases, varying from four months to two years, some amount of menstrual pain had returned, but in each case to a much less degree than had been formerly experienced. In the remaining eight cases I have no note after the first month; but, as I have asked every patient for whom I have done this operation to write to me if she had any return of her previous symptoms, and as I have not heard at all from these eight cases, I think I am almost justified in thinking that they have also been permanently relieved; and that therefore I am well within the mark in estimating that, of the patients with dysmenorrhœa from conical cervix for whom I have performed this operation, in 91 per cent. the relief from pain has been complete and permanent.

With regard to sterility, I find that out of the eighty-seven cases, forty-one were sterile, having been married for periods varying from two to eleven years. I have heard, so far, from twenty-four of these cases, in eighteen of whom pregnancy has resulted after an average sterility of five and a half years. On the whole, therefore, I think I am justified in saying that, in these cases of conical cervix, both the dysmenorrhœa and the sterility are directly due to the contraction and lengthening of the cervical canal, and consequently to mechanical obstruction; that the latter can be completely removed by incision of the cervix, provided that the incision can be kept permanently patent; and that, by the method I have described, which, I submit, is surgically sound, such patency can be secured; and, finally, that the actual results in practice are sufficiently good to warrant a more extended trial of the operation.

DISCUSSION.

Dr. C. H. F. ROUTH said that several papers had been read to the Society upon the surgical treatment of cervical stenosis, and at one time division by a hysterotome was extensively practised, but, unfortunately, after incisions made within the cavity of the uterus some patients died, not from hæmorrhage, but from fatal inflammation. One of the most successful operators was their Honorary President, Dr. Robert Barnes, who relieved dysmenorrhœa to a small extent by dividing the cervix on each side with a pair of scissors. But surgical methods were superseded by a much simpler and safer proceeding. The uterus was supported by a pessary with a stem, a tent covered with cotton wool dipped into carbolic acid was passed into the canal and kept there for two or three days, being changed every twenty-four hours. This method proved effectual in relieving cases of the most desperate kind. The pessary was sometimes kept in for six months, and could then be

removed. The method did not cause any inflammation, but induced a flow of blood not above normal in amount.

Dr. MACNAUGHTON-JONES said that he thoroughly agreed with Dr. Fenwick that in stenosis the obstruction was due to a contracted isthmus, but just as in the male intense spasm might completely close the urethral canal and prevent the emptying of the bladder, so in the female, without any actual stricture, a spasmodic condition of the organic uterine fibres might cause stenosis of the uterine canal. He entirely agreed that the stenosis of the isthmus, so frequently attended by sterility, was also the essential cause of dysmenorrhœa in certain cases, but many others were of ovarian origin, and not infrequently a congested condition of the uterus and an abnormal state of the mucous membrane, without any contraction of the canal, were sufficient to account for the dysmenorrhœa. He had been operating upon the cervical canal almost since his boyhood without any fatality, and with the aseptic precautions which it was now incumbent upon them to adopt he thought that, except from some exceptional accident or subsequent neglect, a fatal result could hardly follow such a simple operation as incision of the cervix. His own method of proceeding was, with all necessary aseptic precautions, to divide the cervix freely with Kuchenmeister's scissors, evert the lips with tenacula, and expose the isthmus; then, having arrested the bleeding, he introduced Sims' knife and divided the stenosed canal crucially, and with a pair of expanding forceps freely dilated the canal. Graduated dilators were then passed. As there was generally some thickening and induration of the mucous membrane due to chronic inflammation, it was important in some of these cases to curette the canal thoroughly, as much menstrual pain was undoubtedly due to the reflex nervous effect of such tissue. After douching out the uterus with formalin solution, he closed the wounds in the cervix, and passed a strip of iodoform gauze through the divided neck, not as Dr. Fenwick

did, leaving any raw surface exposed. The gauze was removed after forty-eight hours, and after giving the patient a few days' rest he passed a solid dilator on a few subsequent occasions. In a very large proportion of cases he found that this procedure permanently relieved the dysmenorrhœa. Much credit was due to Dr. Fenwick for the original method which had proved so successful in his own hands, but had no bad results, such as permanent ectropion, arisen from leaving the lower lip of the uterus exposed in the way described?

Dr. R. H. HODGSON thought that dysmenorrhœal pain was to be referred to the internal os more often than to the cervical canal, and that the real cause of a conical cervix was congestion of the neck of the uterus. Rupture or laceration of the cervix was an acknowledged cause of miscarriage, and it would be desirable to ascertain whether the women operated upon by Dr. Fenwick's method did not miscarry afterwards. He did not by any means join in condemning the stem pessary, which he had found to do all that was necessary in cases of mechanical obstruction; two of his own patients so treated had married and borne children, and he deprecated any mutilation of the shape of the uterus when simpler measures would afford relief.

The PRESIDENT said that the discussion had wandered from the point at issue, which was not the different forms of dysmenorrhœa, but the different methods of treatment of stenosis of the cervical canal. Neither gradual nor sudden dilatation would permanently cure stenosis of the cervix, for the uterine tissue would again contract. The only way, in his experience, to keep the canal patent was, after limited incisions and dilatation, to introduce an aseptic stem and leave it there. The use of scissors on the lips of the uterus seemed to him a barbarity and prevented conception. Sims' operation, which Dr. Macnaughton-Jones and many others carried out in one form or another, was, he thought, to be preferred to the one described by Dr. Fenwick.

Dr. BEDFORD FENWICK, in replying, thanked the Fellows who had taken part in the discussion for the various points of interest which they had raised. He regretted he could not agree with Dr. Routh as to the retention of a stem in the uterine canal, because the use of such a foreign body, to his mind, was neither surgical nor scientific treatment. He could quite understand, however, that its long-continued presence might cause destruction of the tissues and practically the formation of a sinus in place of the cervical canal, but that was not, he thought, a condition to be aimed at. The operation described by Dr. Macnaughton-Jones had certainly the objection that it was somewhat complicated and lengthy, and that the patient required to be frequently dressed after it. The incision of the internal os described by Dr. Heywood-Smith he did not like because it might be dangerous, and in most cases it was ineffectual in securing a permanently patent canal. He recognised the force of Dr. Hodgson's observations that a lacerated cervix was a predisposing cause to abortion, but the practical point was that in the operation he had described the two lips of the cervix, which at first, perhaps, were each an inch long, gradually contracted, until, six or nine months later, he had frequently found them as small as an ordinary cervical lip but with the canal widely patent. The explanation of that contraction was obvious, inasmuch as the blood supply of the lips was materially interfered with by their lateral separation. Finally he ventured to think that the chief advantages of the operation he had suggested were its simplicity and its success. It took about five minutes to perform, and then the patient was never touched till the tenth day, when the stitches were removed. On the other hand, the relief from pain in 90 per cent. of the cases and the cure of the sterility in about 50 per cent., were results which, so far as he knew, no other treatment of the kind had obtained; and, therefore, he could at least plead that nothing succeeded like success.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 14, 1904.

DR. HEYWOOD SMITH, PRESIDENT, IN THE CHAIR.

ANNUAL MEETING.

THE minutes of the preceding meeting having been read and confirmed, Dr. SWANTON, Senior Secretary, in the unavoidable absence of Dr. Travers, read

THE TREASURER'S REPORT AND BALANCE SHEET.

“In presenting this year's Balance Sheet, the Treasurer feels any comment upon the financial state of the Society unnecessary; he would simply have to repeat his remarks of last year. Bad times still continue, and an undue number of resignations have been made for this cause; the Society may, however, be congratulated on the fact that this year ends with a surplus of ten Fellows over the preceding year. “Subscription-memory” is still very defective, and eighty Fellows have suffered from this only too common ailment (despite two reminders from the Treasurer) during this Session. In resigning, with very real regret, his office, the Treasurer would wish to tender his sincere thanks to the Editor and Secretaries, also to the Auditors, for the kind and courteous manner in which they have always been anxious to assist him in his duties.”

Mr. BOWREMAN JESSETT, in proposing the adoption of the Report and Balance Sheet, said he thought all must thank the Treasurer for his report and statement of accounts,

The British Gynaecological Society.

Dr. RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING DECEMBER 31, 1903. Cr.

		£ s. d.		£ s. d.		£ s. d.	
To Balance brought forward December 31, 1902	27	10	0	203 6 9
" Fellows' Subscriptions—							52 10 0
1 at 210s.	10 10 0				31 10 0
1 " 105s.	5 5 0				0 5 0
1 " 84s.	4 4 0				1 1 0
8 " 63s.	25 4 0				0 8 6
1 " 43s. 2d.	2 3 2				5 18 0
1 " 60s.	3 0 0				3 3 0
26 " 42s.	75 12 0				1 1 0
1 " 22s.	1 2 0				2 5 0
1 " 21s. 4d.	1 1 4				6 6 6
1 " 21s. 6d.	1 1 6				0 14 8
244 " 21s.	256 4 0				6 0 6
1 " 20s. 6d.	1 0 6				1 17 0
3 " 20s.	3 0 0				1 16 6
2 " 19s. 10d.	1 19 8				3 10 0
" Balance from Dinner	391 7 2*				52 10 0
" Dividends on Investments—			5 8 0				60 17 0
Caledonian Railway	0 3 10				
Grand Trunk Railway	10 4 4				
			£435 0 4				£435 0 4

We hereby certify that we have examined the above account and the counterfoil receipt books and vouchers in connection therewith and find it to be correct. And we also certify that the Society holds the following Securities: £270 Grand Trunk Railway 4 % Debenture Stock, and £5 Caledonian Railway 4 % Debenture Stock. The said two certificates being presented to us.

F. A. PURCELL, M.D.
C. H. BENNETT, M.D.

* Including arrears.

and all would regret that through ill-health he was not able to continue his duties for another year, and earnestly wish for his speedy recovery. However, the Society was to be congratulated on having such an able successor, Dr. Slimon. He concluded by proposing a vote of thanks to Dr. Travers for the efficient manner in which he had carried out his work.

Dr. ELDER agreed warmly with the remarks of Mr. Jessett in reference to Dr. Travers and Dr. Slimon, and had pleasure in seconding the adoption of the Report and Balance Sheet and the vote of thanks to the retiring Treasurer, coupling with it an expression of regret at Dr. Travers' illness, and hopes for his speedy recovery.

The motion was carried unanimously.

Dr. J. J. MACAN then read—

THE EDITOR'S REPORT.

The four numbers of the BRITISH GYNÆCOLOGICAL JOURNAL issued during the year 1903, contain 648 pages in all, a slight excess over the forty sheets recommended by the Journal Committee. The Proceedings of the Society occupy as usual considerably more than one-third of the whole, and the preparation of these sheets from the shorthand reporter's notes, as well as that of the condensed reports for the *Lancet*, *British Medical Journal*, *the Journal of Obstetrics and Gynæcology of the British Empire*, and *The Medical Press and Circular*, formerly entrusted to an Assistant Editor, I have, as in 1902, undertaken myself. The reports for the *Lancet* and *British Medical Journal* have invariably been delivered at the offices of those papers on the Monday morning next after the meeting of the Society, and their undue curtailment or non-appearance has not been in any way due to neglect of mine. In view of the possibility of my being prevented by illness or otherwise from being present at the meetings of the Society, and especially with the object of ensuring continuity in the direction of the Journal, I shall be glad when the Society can give me a coadjutor for this work.

Many original communications read at the meetings of the Society are included in the Proceedings, and, as of special importance, I may instance Sir J. Halliday Croom's Valedictory Address upon "Gynæcology as a Specialty," the able and comprehensive survey of the work done by our Society since its initiation, given us in the Inaugural Address of our President, Dr. Heywood Smith, and other papers to be mentioned this evening in his Valedictory Address.

The original communications not read at meetings of the Society include papers by Professor Byers "On the Early Treatment of Puerperal Infection," and by Dr. Granville Bantock "On the Conservative Treatment of Lesions of the Uterine Appendages," and a number of papers by some of our most distinguished Foreign Fellows, Honorary and otherwise; these were translated by myself from the original manuscript or from reprints furnished by the authors, and they had the opportunity of revising the proofs and of bringing their work up to date where necessary.

There has been a considerable expansion in the space devoted to Reviews, and I am greatly indebted to the assistance of those Fellows who, anonymously or otherwise, have helped me in this very important part of the Journal. In some instances these communications have extended to considerable length, and even been rather an abstract of the views put forward than ordered criticism of the work, but in many instances this has been no disadvantage, especially in regard to books in foreign languages.

The Summary of Obstetrics extends to 200 pages, rather less than in some previous years, but this deficiency is more than compensated for by the translation of papers by foreign Fellows already mentioned. I am, in this department, gratefully indebted to several of my collaborators, and especially so to Dr. Frederick Edge, Dr. P. Z. Hebert, and to Mr. Furneaux Jordan. The abstracts uninitialled are, I believe, without exception, from my own pen.

The economy of printing the summary in small pica type has been supplemented by a change in the paper employed for one smoother and better adapted to receive block impressions. This paper being thinner than that formerly employed, the numbers of the Journal may have appeared to be smaller than in former years, but the average number of pages has been maintained. Unfortunately we have not been able to dispense altogether with the use of plate paper.

I have used my best endeavours to issue the Journal punctually and with more satisfactory results than in any previous year; in only one instance was the issue delayed beyond the end of the month, and the delay was then due to a mistake about the advertisements. The sales of the Journal continue about the same.

J. J. MACAN.

Dr. H. MACNAUGHTON-JONES moved the adoption of the Editor's Report. He thought he might truthfully say that the credit of the Society all over the world was maintained by the character of its Journal. He was therefore proposing no empty vote of thanks, but a cordial expression of appreciation of the Editor's work, for which the Society could not sufficiently thank him.

Dr. MACPHERSON LAWRIE seconded the vote of thanks. He thought few of the Fellows realised the enormous amount of labour there must be in performing the duties which were carried out so well by the present Editor of the Journal. Living in the country as he did, he found the Journal of the very greatest value to him, and must congratulate the Editor most heartily on the result of his labours.

The resolution was carried unanimously.

Dr. J. J. MACAN briefly expressed his thanks to the proposer and seconder of the motion, and to the Fellows for the very cordial way in which they had accepted it. He asked them to believe that nothing could be a greater encouragement to him.

Mr. SPANTON said he had great pleasure in proposing a vote of thanks to the Auditors for their work during the past year. He was sure their work had been a labour of love as well as a work of labour, and the Society was very much indebted to them for it. The motion was seconded by Dr. SLIMON, carried unanimously, and suitably acknowledged by Dr. C. H. BENNETT.

The PRESIDENT said the Meeting would now proceed to the election of the Officers of the Society for the ensuing year. He pointed out that Dr. Slimon, who had allowed himself to be nominated as Treasurer of the Society, was originally put down in the Balloting Lists for the Council, therefore a vacancy occurred in the nominations for the Council.

Mr. BOWREMAN JESSETT proposed that the name of Dr. Macpherson Lawrie of Weymouth be added to the list for the Council.

Dr. SNOW seconded the motion, and it was carried.

The PRESIDENT appointed Mr. Ryall and Dr. Macnaughton-Jones, junr., to act as Scrutineers for the Ballot.

ALTERATION OF BYE-LAWS.

Dr. BEDFORD FENWICK said that he had to move formally the resolutions standing on the notice with reference to the change in the Bye-Laws. In accordance with the desire of the President he must explain that in November a special meeting was held under the Companies Act, and a resolution was passed to alter the Articles of Association of the Society, so that in future the election of Fellows should be made by the Council and not by the whole Society. The motion was carried, and as it was confirmed at an Extraordinary General Meeting held in accordance with the Companies Act, on December 30, 1903, and therefore became part and parcel of the Articles of Association, it was unnecessary to discuss it further. Those Articles of Association were the Corporate rules of the Society in regard to its duty to the public; but the Society had domestic rules in the

shape of Bye-Laws, and those Bye-Laws, according to the Companies Act, must be made to conform accurately with the Articles of Association. Consequently it had become their duty to alter the Bye-Laws by a few words, so that the Articles of Association should agree with the Bye-Laws. The first Bye-Law requiring alteration was Section II., No. 2 : "The name of each candidate must be submitted at one meeting of the Society and balloted for at the next." The word "Council" should be substituted for "Society," and the word "voted" for "balloted," so that the Bye-Law would read : "The name of each candidate must be submitted at one meeting of the Council and be voted for at the next." In the next place, the Articles of Association formerly provided for blackballs to be used at the election of Fellows, and that one blackball in six should exclude. By the alteration in the Articles of Association making the Council the elective body, the blackballs became useless, and Section II., No. 3, referring to blackballs, should be therefore altogether omitted. It therefore became necessary that Bye-Laws 4, 5, 6 and 7 of Section II., should be renumbered, and he formally proposed that the following alterations be made in the Bye-Laws of the Society, to bring them into accordance with the Articles of Association. Section II., 2, shall read : "The name of each candidate shall be submitted at one meeting of the Council and be voted for at the next." Section II., 3, shall be deleted, and Section II., 4, 5, 6 and 7, shall be renumbered accordingly.

Dr. HERBERT SNOW seconded the resolution.

The PRESIDENT, in reply to a question from Dr. C. H. Bennett, pointed out that at the foot of the notice convening the Extraordinary Meeting on December 30, the following was printed : "The Council proposes that the names of candidates be printed and circulated among the Fellows and suspended at the ordinary general meeting previous to the election." This was in order that every Fellow of the Society should know what candidates were

proposed for election. At the meeting of the Council each name would undergo severe scrutiny, and there would be an opportunity for members of the Council themselves or for Fellows of the Society outside the Council, to object to any names which might be brought forward. Thus there would be sufficient guarantee that the worthiness of every candidate would be provided for.

Dr. BENNETT said he thought that would be very satisfactory, and he was glad he had asked the question.

The motion was then put and carried unanimously.

The PRESIDENT announced that the following Officers for the year 1904 had been unanimously elected:—

Hon. President.—R. Barnes, M.D., F.R.C.P.

President.—Professor J. W. Taylor, M.D., F.R.C.S.

Vice-Presidents.—E. Stanmore Bishop, F.R.C.S.; Professor Murdoch Cameron, M.D.; F. B. Jessett, F.R.C.S.; Sir A. V. Macan, M.D., F.R.C.P.I.; H. Macnaughton-Jones, M.D., F.R.C.S.I.; J. A. Mansell-Moullin, M.A., M.B., M.R.C.P.; Christopher Martin, M.B., C.M., F.R.C.S.; F. F. Schacht, B.A., M.D.; Professor Alfred Smith, M.B., F.R.C.S.I.; Heywood Smith, M.A., M.D., M.R.C.P.; W. D. Spanton, F.R.C.S.; W. Travers, M.D., F.R.C.S.

Treasurer.—W. H. Slimon, M.D., F.F.P.S.

Council.—G. R. Carter, M.R.C.P.I.; Eber Chambers, M.D., M.R.C.S.; R. J. Colenso, M.A., M.D.; Sir J. H. Croom, M.D., F.R.S.E., F.R.C.P., F.R.C.S.E.; T. M. Dolan, M.D., F.R.C.S.; W. Duncan, M.D., F.R.C.S.; F. Edge, M.D., M.R.C.P.; G. Elder, M.D.; T. J. English, M.D.; Bedford Fenwick, M.D., M.R.C.P.; J. Haig Ferguson, M.D., F.R.C.P.; Clement Godson, M.D., M.R.C.P.; Arthur Helme, M.D., M.R.C.P.; James Jardine, M.B., C.M.; Henry Jellett, M.D., F.R.C.P.I.; J. Macpherson Lawrie, M.D.; R. P. Ranken Lyle, M.D.; S. Lloyd, M.D.; J. Padman, M.R.C.S.; Mayo Robson, F.R.C.S.; Charles Ryall, F.R.C.S.; R. T. Smith, M.D., M.R.C.P.; Herbert Snow, M.D.; H. F. Vaughan-Jackson, M.R.C.S., L.R.C.P.

Editor of the Journal.—J. J. Macan, M.A., M.D.

Hon. Secretaries.—J. H. Swanton, M.A., M.D.; S. Jervois Aarons, M.D.

Auditors.—C. H. Bennett, M.D.; F. A. Purcell, M.D.

Trustees of the Property of the Society.—G. Granville Bantock, M.D.; R. S. Fancourt Barnes, M.D., F.R.S.E.; Clement Godson, M.D., M.R.C.P.

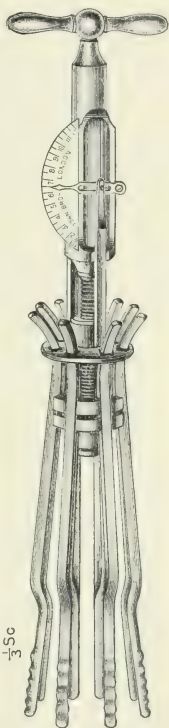
The PRESIDENT then exhibited—

FROMMER'S MODIFICATION OF BOSSI'S
INSTRUMENT FOR DILATING THE
CERVIX UTERI,

and demonstrated the ease with which any one or more of the eight blades could be removed, so that it was possible, instead of commencing the dilatation with the finger, to begin the process with three blades only and complete it with the eight. The action was controlled by a screw and the exact amount of expansion was indicated on a dial on the handle. The risk of lacerating the cervix was materially diminished by having eight blades instead of four. The instrument had been procured from Messrs. Down, Bros.

A SOURCE OF INFECTION DURING OPERATION HITHERTO NOT SUFFICIENTLY RECOGNISED. By MENDES DE LEON, M.A., M.D. (Amsterdam).

Mr. PRESIDENT AND GENTLEMEN,—I must begin by apologising in the first place for having to speak in a language which is not my own, and therefore not as easily and as fluently as those you are accustomed to hear, and in the second place for calling your attention to a question that is not entirely, or at all



events not specially, gynæcological. Surgery has, however, nowadays taken such an important place in therapeutics, and especially so in gynæcology, that the question of antiseptics and asepsis can never be entirely devoid of interest, though it may, as you say in England, seem like carrying coals to Newcastle to come to the land of Lister and address, upon it, a Society which counts among its members so very many distinguished surgeons whose results speak for themselves.

For years past we have sterilised our hands, our instruments, the field of operation, and everything that is necessary for its performance. New methods of sterilisation and new apparatus are being introduced nearly every day. During the last five or six years no less than thirty papers have appeared dealing merely with the way we should sterilise our hands; so it would really seem as if nothing has been left unsaid or undone as far as this question is concerned. In fact, since Robert Koch's investigations in 1878 on the etiology of wound-infection, we have become thoroughly convinced that such infection occurs only from contact, and we have sterilised everything that is likely to approach the wound.

In some few publications only has any very great stress been laid on the possibility of air infection, and it has seemed sometimes as if the whole theory of the great Lister might be thrown over and forgotten. The idea that the microbes of the air might play a more important part in wound infection than most of us were inclined to think, occurred to me by mere chance in the following way.

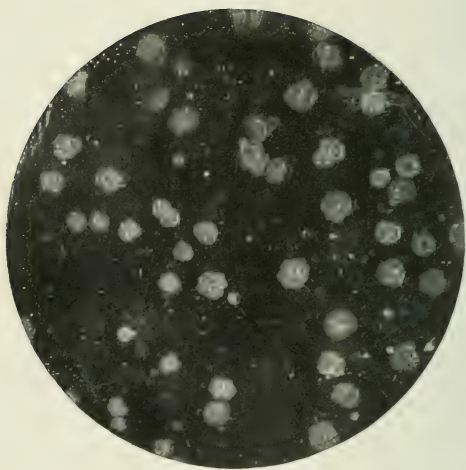
About a year ago, while speaking to a friend who was standing with his face lit up by rays of sunlight coming through a small hole in the window curtain, I noticed that, of the thousands of little particles of dust dancing in the sunlight, the majority, while this gentleman was speaking, travelled in a direction opposite to the sun-rays, that is to say, from his mouth towards the window. At first I thought that the direction given to these little par-

ticles was due to merely his speaking, but on approaching him and putting my hand near his mouth, I felt it moist. I therefore concluded that the phenomenon was caused by particles of saliva projected from his mouth in the act of speaking. We know that some people, when speaking, have the very disagreeable habit of spraying about saliva from their mouth, and unfortunately sometimes we can even feel it on our faces and hands; but it is easily proved that this habit is far more common than has been recognised; that *every one in speaking emits more or less saliva*. If we place a looking-glass at a distance of 25 to 30 centimetres from the mouth, after speaking a few words in its direction, we can see that the whole surface of the glass, or a great part of it, is spread over with small drops of saliva. Now, every surgeon is obliged to speak during an operation; and it is therefore evident that drops of saliva such as I refer to must find their way into the wound when we are operating, and the question arises whether this is dangerous to the patient, and likely to cause infection of the wound?

As I felt sure that this must be the case I decided to investigate the matter more closely. While occupied with my experiments, I naturally read up the subject, and found the old saying true that there is nothing new under the sun. This question has been investigated by others, though I was not aware of it, perhaps because what had been written and said about it was in hygienic and bacteriological works, or in meetings of societies on those lines, rather than in connection with surgery or gynecology. Flügge was the first to point out the danger of small drops of saliva sprayed into the air, which occurred to him while he was investigating the ventilation of sick and invalid rooms, and he pointed out the risk of infection from tuberculosis and other kinds of disease in this way. Huebener, who was at that time assistant to Miculicz, hearing of the researches of Flügge, thought the same danger might apply to operating, and, by personal experiments, demon-

strated that in speaking many drops of saliva were projected into the air, and during operation might easily pass into the wound. Having rinsed his mouth with a culture of the *Bacillus prodigiosus*, he spoke on to agar plates prepared for the experiment, and in from twenty-four to thirty-six hours a multitude of red colonies were distinctly visible upon the plates, and of course could not be due to anything else than the drops of saliva which had left his mouth in speaking. These experiments and researches, though important, did not seem to me to be conclusive as to the possibility of infection, because saliva might reach the wound without causing infection. I therefore wished to determine what forms of microbes leave the mouth in the saliva, and if possible what number of them. That the human mouth is a fertile focus of infection has been abundantly proved by hygienists, and very conclusively also by members of odontological societies and dentists in England and elsewhere. Miller, one of the foremost dentists in Berlin, found twenty-two different sorts of germs or microbes in the saliva, and he, Goadby of London, and others have traced various local diseases, including even alveolar abscess, osteitis, osteomyelitis, periostitis, fistula, and septic troubles in the lungs and digestive tract to microbes which occur in the saliva, or at any rate, in the mouth.

What I wished especially to investigate, however, was the kinds and number of microbes emitted from the mouth in speaking. My experiments were carried out in the following way: I had some agar plates prepared, but instead of rinsing my mouth with the *Bacillus prodigiosus* as Huebener had done—and I was experimenting myself before I knew of his work—I spoke on to the plate in the ordinary way. The difficulty was to shut out the numbers of microbes which we know are suspended in the air in any room, and especially in that of a laboratory. To exclude these microbes I had a box made with an opening to fit the mouth on its upper side, and a sliding drawer at its base,



Drops of saliva on agar plate containing colonies of streptococci and staphylococci,
p. 329 (Dr. Mendes de Leon).

and having carefully sterilised the apparatus, I opened this sliding drawer, put one of my agar plates upon it, and shut it immediately, so that I could be sure there were no ærial microbes in the box. I had previously got my assistant to write down all the words I had spoken at an operation; these words I repeated into the box, through the opening in the direction of the plate, and of these plates I now show you one. The very small colonies which you can see on the plate are streptococci, every one of them; the larger whitish ones are diplococci, and the yellow ones staphylococci.

Now these plates prove that when we speak microbes are emitted from our mouths, and if we are operating, those microbes will be projected into the wound. In fact, in speaking while operating we emit multitudes of most dangerous and infectious germs, which are a source of real danger. I have traced four sorts of these germs in every one of the several hundred experiments I performed, that is to say, streptococci, staphylococci, diplococci, and a sarcina microbe not so dangerous in wounds as the others.

Now, gentlemen, I wished to determine not only the sorts of germs emitted, but also—though mathematical accuracy was out of the question—to find out as nearly as possible how many of these germs were projected into the field of operation. On another of these plates, instead of agar I spread out about half a dozen cover-slips, and spoke into the box against them in the same way. On those cover-slips I found a number of small drops of saliva, which I stained in the usual way, examined, and on a surface of about 2,000 micro-millimetres found 140 germs, of the forms already mentioned, and easily countable. The drop of saliva measured, on the surface, as near as possible 62,500 micro-millimetres, and this multiplied by 140 and divided by 2,000 gives 4,375 microbes for each drop of saliva. In speaking 200 words, you will certainly emit at least sixty drops of saliva, and I am sure, gentlemen, each of you will speak at least 200 words, even in an operation

lasting only a quarter of an hour ; so if we multiply this number 4,375 by 60, we may assume that nearly a quarter million dangerous microbes fall into the wound.

To meet the possible objection that these streptococci, diplococci and staphylococci may be innocent, because we know that sometimes streptococci are not virulent at all, I thought it well to go a little further and study the virulence of the streptococci and other microbes from my own and other mouths. I therefore had them cultured, and I inoculated about sixty animals with the cultures—that is to say, forty-one guinea-pigs, fifteen white mice and five rabbits. Of these, eight guinea-pigs and ten white mice died. The inoculations were made into the peritoneum and subcutaneously, and the sections after death showed that the animals died of peritonitis ; the microbes were found in the liquid exudation from the peritoneum as well as in the liver and heart. I am therefore absolutely sure that the deaths were due to the inoculation. Two of the rabbits died also, but as their death occurred two months after the inoculation, I did not think it right to attribute their death to that cause ; but from the other animals I obtained pure cultures of the microbes upon gelatin, milk, potato and blood agar, and there was not the slightest doubt that they were staphylococci, streptococci, and diplococci, the germs which cause suppuration and inflammation.

It therefore seemed to me proved that when we operate we are continually risking infection of the wound, and I felt it of the greatest importance to find out how to prevent such infection. On consulting the literature of the subject I found that, in this direction, nothing adequate had been attained. The most reasonable advice that had been given was, to abstain from speaking at all. But as I have already said, this is practically impossible. Every surgeon must admit that he not only speaks, but speaks a good deal during an operation ; some surgeons are talking all the time, and often with their faces very near the field of operation. It is true that sometimes the mouth is averted,

but more often they speak directly into the wound. Moreover, the more difficult the operation, the more excited and agitated the operator becomes, and the more and the louder he talks, while if he has a stupid assistant or stupid nurses, or both, he cannot help talking louder and more excitedly than when everything goes smoothly and calmly. And of course the louder and the more rapid the talking, the greater the number of microbes which are emitted into the wound, or at any rate, into the air round the wound.

I do not, however, wish to submit to you merely my own experience. During the last six or seven operations which I have done I asked one of my assistants to note exactly how many words I had spoken and what I said. I also asked some of my surgical friends to do the same, and six of them were kind enough to comply, and answered my questions. The first of these spoke 85 words, another 248, another 200, another 226, and another 144 words, while number six spoke 246. And we must remember, in the first place, that these numbers are minima; what the assistants said was not noted, and every assistant has occasionally to answer a question or instruction addressed to him. In the second place, many words must have been indistinctly heard or forgotten and therefore not noted down. In the third place, I have no doubt that some of these gentlemen, under the conditions I imposed, spoke less than they usually do. One of them was honest enough to write and say that it was impossible for him to continue operating in this way; being obliged to abstain from speaking was such a strain that it made him nervous, and that, as a rule, he spoke four times as much as when he was conducting the experiment I asked him. The advice not to speak during an operation is therefore all very well, but practically quite impossible to carry out.

A second method suggested to prevent the infection of wounds from talking, is by rinsing and so sterilising the mouth with an antiseptic; but to sterilise the mouth

properly we should have to use a solution of sublimate, and the buccal mucous membrane is too delicate to allow this. Many experiments, indeed, have been made in this direction, especially by the odontological branch of the profession, and I tried several of the methods recommended. There is a prescription by Miller of a solution containing benzoic acid and saccharine, which I tried, but the only effect it had was to produce much more saliva in my mouth than under ordinary circumstances. I also experimented with my plates when using this solution, and found on them the same germs as before. The more liquid part of the saliva contains multitudes of streptococci, which are the worst of the lot. I also tried odol and other well-known mouth washes, but none of them had any effect worth mentioning in diminishing the number of organisms which were emitted in speaking.

I therefore concluded that the only way of preventing this danger was to adopt mechanical means; that is to say, to try to prevent in a mechanical way any saliva leaving the mouth, and carrying microbes into the wound. Huebener and others have employed masks with this object, and perhaps some gentlemen here present have also done so. The masks are made, some of single and others of double gauze, and I experimented with both kinds in the way I have already described. Speaking in front of the plates with a single gauze mask on, resulted in 75 colonies of microbes on the plate, among which there were 39 of streptococci; with double gauze there were 21 colonies. With the double gauze masks the number of microbes which found their way outside, was naturally much less, but in both cases there were far too many.

Finally, I concluded that the best way to prevent these microbes doing any harm was to shut the mouth off with cotton wool, because we know that cotton wool is the most certain way of excluding microbes. The difficulty was to keep the cotton wool before the mouth while operating, without inconvenience, but I devised this very simple

little apparatus, which seems to me to answer the purpose very efficiently; it is a kind of respirator, and between double metal plates, each of which is perforated with small holes, there is room for a small quantity of wadding, quite sufficient for the purpose. After it has been inspected I will put on this respirator, and you will find that it does not interfere with speech, that can be easily heard, though it does prevent the exit of dangerous microbes from the mouth. I show you, moreover, one of the agar plates which has been spoken upon through this mouth-piece, and you can easily prove for yourselves that not a single colony of microbes has been developed upon it. I repeated this experiment several times to make sure, but always with the same result. One or two colonies could sometimes be seen on the plate, but I satisfied myself that they could only have come there through air infection, for there must have been a few moments during which the slide was exposed to the air before the drawer could be pushed back again.

The conclusion which I desire to bring before you is, that where we take so much trouble in sterilising our hands, our instruments and the whole area of operation, as well as the room in which it is done and everything which comes near the patient, we ought not to neglect this simple precaution against the risk of which I have been speaking, for I hope I have been able to convince you that it is a real danger, and that it may be as great a source of infection as those which we habitually guard against.

I have to thank you, Mr. President, for allowing me the opportunity of explaining this little matter at which I have been working, and you, gentlemen, for having so kindly and attentively listened to me. I may mention that I have placed under the microscopes on the table slides containing streptococci, staphylococci, and diplococci which I cultivated from the inoculated guinea-pigs, as well as others directly sown by speaking into the box which I have described.

DISCUSSION.

The PRESIDENT said he felt sure the Fellows would wish to thank Dr. Mendes de Leon for his very valuable and interesting paper. The effect of habit and temperament in operators was very remarkable. Some went on talking nearly the whole time; others, and he thought the best operators, conducted their work without speaking at all. He thought the upshot of the author's experiments was that they should never speak at the operating table except when it was absolutely necessary. Dr. Macnaughton-Jones had recently read a paper which would be interesting to the author of the one they had just heard as it was upon a kindred subject—the care of the mouth and teeth, a much neglected source of infection, prior to operations upon the pelvic viscera.

Dr. MACNAUGHTON-JONES had much pleasure in moving the vote of thanks suggested by the President to Dr. Mendes de Leon for his very interesting paper, and the experiments with which he had illustrated it, but said that he greatly doubted whether we could ever arrive at a perfectly ideal asepsis. There were so many possible sources of the admission of infective germs in the surroundings of the operation—the patient, the surgeon, the assistants, the nurses, the appliances, and the operative tract itself, before, during, and after an operation—that all we could at the best hope for was to reduce to the lowest minimum the elements of risk which must always be present, no matter what our precautions. It was this striving for perfection that afforded the best security for our patient, and no effort such as that advocated by Dr. Mendes de Leon should be ridiculed or treated lightly. Abroad, in some kliniks, masks and linen caps were worn, and also sacs to cover the beard. As to silence, speaking for himself, nothing irritated him more than unnecessary talk during an operation, but he supposed that this tendency varied with the nationality of the operator. The great desideratum was silence during

an operation, and only such speech as was indispensable. The demonstration which they had seen left no room for argument as to the practical consequences which resulted from speaking over the wound, but fortunately they did not seem to result in any very serious effects on the patient, seeing the immunity of our graver operative procedures. Still, if we only saved one patient in a thousand on whom we operated from any evil consequences of salivary infection, it was our duty to take every precaution to prevent that risk. He could not say how the mouth mask shown could be worn during a prolonged operation without inconvenience to the operator, but he would himself try it in order to ascertain this.

Dr. HERBERT SNOW had great pleasure in seconding a vote of thanks to Dr. Mendes de Leon for his most interesting account of the experiments he had carried out with such care and perseverance. All progress towards asepsis was merely relative, and whatever the danger of the emission of small particles of saliva might be, the breath passing through the nasal cavities and mouth must be extensively loaded with microbes, and he did not see how infection from that source could be possibly excluded: drops of perspiration were another danger. As the experiments of Lockwood, among others, had shown, absolute sterilisation could not be secured. Whatever was done, some microbes would be implanted on the wound. If, however, the tissues were in anything like a healthy state, and if the number of pathogenic germs coming in contact with the wound was relatively small, there would not be any serious trouble. It would be interesting to know whether, before adopting the precautions described, Dr. de Leon had experienced disasters from undetected causes, which had not occurred since those precautions had been taken.

Dr. MACPHERSON LAWRIE expressed his sense of the great interest of the results arrived at by Dr. Mendes de Leon, but concurred with Dr. Snow in thinking that the breath of the operator might also be a fertile source of

infection and thought that the nostrils should be guarded as well as the mouth, if it were desirable to cover the latter.

Dr. BEDFORD FENWICK said that the paper they had heard was of great practical as well as theoretical value, though the author had confined himself to the effects of speech, and he could not agree with him that the saliva was such a dangerous source of infection. Many years ago his (Dr. Fenwick's) father made some original researches upon the effect of the saliva in health and disease, which at the time attracted attention, and in that work he had been privileged to assist. They had found that in all healthy people the saliva contained a large amount of sulphocyanide of potassium, and was therefore powerfully antiseptic. He could not therefore agree with Dr. de Leon in attributing more importance to the saliva than to the breath as a vehicle of micro-organisms, but thought, with Dr. Macpherson Lawrie, that as a source of infection the nose was as important as the mouth.

Dr. W. J. SMYLY having made a few remarks of appreciation,

Dr. MENDES DE LEON, in reply, said that, in regard to the amount of talking during operation, Dutchmen had not the same temperament as Irishmen, French, or Italians, and were generally supposed to take things very quietly; yet even those friends of his who said, "Well, I will do what you ask me, but it will be of no use, because I do not talk at all during operations," nevertheless sent him protocols of 200 to 300 words spoken over the wound. Though 300 words might seem a very large number, they might easily be said during an operation that did not take more than fifteen minutes. As a characteristic incident, he might tell them that one of the best surgeons in Amsterdam, who habitually took extraordinary precautions against sepsis, noticing on one occasion that an etherised patient seemed to be about to vomit, cried out with great energy, "Look out, she is going to vomit, and if you are not careful she will spit into the wound"—the very thing that he

was, without knowing it, doing himself. Absolute asepsis was not, perhaps, obtainable, but every possible precaution should be taken, especially when so easy as the one he had suggested. Before he brought his mask before the profession, he had used it for several weeks during many operations, some of them lasting from an hour to an hour and a half, and he could assure Dr. Macnaughton-Jones that it did not cause the slightest discomfort. The instrument could be thoroughly sterilised, was very easily adjusted and did not interfere with audible speech, as he would now show them. In regard to germs being disseminated into the air from the nostrils, as insisted on by Dr. Lawrie and others, he did not deny the possibility, but was not convinced of the danger; the pathogenic germs he had demonstrated in the saliva had not been found in the healthy nose, though streptococci had no doubt been found there in ozæna and similar inflammations. He was absolutely convinced that the microbes emitted with the voice were conveyed by the saliva, and not merely by the breath, as suggested by Dr. Fenwick, for in spite of repeated trials, he had never obtained any colonies upon his agar plates simply by breathing upon them. This had not surprised him, as he knew that it was the saliva that caused peritonitis in the inoculated animals. While pathogenic germs might be emitted from diseased lungs, his experiments absolutely proved that they had been conveyed by the saliva on to the agar plates, upon which they had caused definite colonies. If every streptococcus or staphylococcus that fell into a wound caused infection, the effect of a quarter of a million of such would be terrible to contemplate; but, fortunately, this was not the case, and surgeons now had very good results, especially in gynaecology. We should, however, aim at the lowest possible mortality, and as the mysterious deaths that occasionally occurred in the practice of even the most distinguished operators might be due to some such cause as he had pointed out, the admission of such a possibility and steps to guard against it could only be beneficial.

A cordial vote of thanks to Dr. Mendes de Leon having been carried by acclamation.

The PRESIDENT (Dr. Heywood Smith) then delivered his—

VALEDICTORY ADDRESS.

GENTLEMEN,—The time has now arrived for me to vacate the Presidential Chair, to which honourable position you kindly elected me a year ago, and in following the time-honoured custom of giving a Valedictory Address, I have to speak of many things, which I will do in as short a space as possible. And first of all, continuing the sketch I gave in my Introductory Address of the work done by the Society during its previous years, I will bring the information on that topic up to date.

There were exhibited about 20 important specimens, classified as follows: of ovaries 7 specimens, 5 of sclerosis, 1 of multilocular cyst with semi-solid contents, and 1 dermoid; 2 cases of ovaries with adherent fibroid of the uterus, and 1 of hæmatocyst with hæmatosalpinx. Of oviducts, 1 case of salpingitis and 1 of hæmatosalpinx, 1 cyst of the broad ligament, suppurating. Of fibroids of the uterus 5 cases, of which 3 were the subject of calcareous degeneration. One case of cancer of the fundus uteri, and 1 unique case of cancer in an isolated duct in the axilla.

Of cases narrated without the exhibition of specimens: 1 case of cyst of the round ligament, 1 case where coeliotomy had to be performed three times for hæmorrhage—(1) for removal of the left adnexa, (2) of the right ditto, and (3) hysterectomy. A case of cellulitis after convalescence from hysterectomy for fibroid. A case of incarcerated and irreducible femoral hernia, and one of radical cure of recurrent ventral hernia.

Of instruments shown: a curved knife for dividing the peritoneum in coeliotomy, and an improved Bossi's dilator. The introduction of this instrument to the profession has marked a great advance in the treatment of certain difficult obstetric cases.

There has been a number of very valuable papers read before the Society, of which by no means the least interesting has been that brought before us to-night by Dr. Mendes de Léon, and the thanks of the Society are specially due to him for taking the trouble of coming all the way from Amsterdam to read it before us.

The first paper of importance out of seven was one by Dr. Macnaughton-Jones on the "Importance of Attention to the Condition of the Mouth and Teeth at Operations on the Pelvic Viscera"; on "Intestinal Obstruction after an Operation for Ectopic Gestation," by Mr. Jessett. Dr. Routh read a paper on "Some Directions and Avenues through which Cancer may possibly be more Successfully Treated and perhaps Cured." Dr. Mansell Moullin read a paper on "Hæmatocolpos and Hæmatometra." Professor Taylor (our learned President-elect) gave us a valuable paper on "Lacerations of the Cervix and their Consequences." Dr. Bedford Fenwick opened an interesting discussion on "The Treatment of Stenosis by Incision"; and Dr. Mendes de Léon has given us to-night a most instructive paper on "A Hitherto not Sufficiently Recognised Source of Infection during Operations."

Of our Journal, under the able conduct of our Editor, Dr. Macan, I cannot speak too highly, for besides an accurate report of our transactions there have appeared many very valuable original communications, and the Summary of Gynæcology, including Obstetrics, exhibits a most painstaking and laborious effort, and keeps the Gynæcologist fully up to date with the progress of the speciality all over the world.

Of the original communications I would notice "The Early Treatment of Acute Puerperal Infection," by Professor Byers; "On Determination of Sex," by Schultze; "On the Conservative Treatment of Lesions of the Uterine Appendages," by Dr. Bantock; "On the Value of Abdominal Radical Operations in the Treatment of Uterine Cancer," by Franz; "On the Treatment of Hæmatocele,"

by Zweifel; and a most exhaustive paper on "Hermaphroditism," by von Neugebauer.

Besides these the Journal contained the reports of several Congresses and important provincial meetings.

Two events have taken place during my year of office, both of which are of sufficient importance to warrant a mention here. One is the altered attitude of the Society towards the admission of medical women to the Fellowship, and the other is on the establishment of an examination for Gynæcological and Maternity Nurses.

With regard to the former matter I may here remark that the Articles of Association and the Bye-Laws of the Society were originally drawn up with the distinct view of the admission of medical women, as well as medical men, to the Fellowship, but a small minority of Fellows, although they joined the Society, yet were opposed to that idea, and, making their influence felt, frustrated in that direction the principles of the Society. We have held several important meetings on the subject, and I must give credit where it is due by stating that several members of the opposing minority, when they saw the manifest feeling of the Society on the subject, withdrew their opposition, and aided the Society in so altering their rules as to make the election to the Fellowship simpler, while at the same time safeguarding its interests with regard to the eligibility of any particular candidate.

And here it may not be inappropriate to quote part of a remarkable speech made by the late Lord Salisbury in the House of Lords in 1863, in opposition to a Bill brought in by Mr. Gladstone on some point with reference to the Irish Church.

"I quite admit" (he said)—"everyone must admit—that when the opinion of your countrymen has declared itself, and you see that their convictions—their firm, deliberate, sustained convictions—are in favour of any course, I do not for a moment deny that it is your duty to yield. It may not be a pleasant process, it may even

make some of you wish that some other arrangement were existing ; but it is quite clear that whereas a member of a Government when asked to do that which is contrary to his convictions, may resign, and a member of the Commons, when asked to support any measure contrary to his convictions, may abandon his seat, no such course as this is open to your lordships ; and therefore on these rare and great occasions on which the national mind has fully declared itself, I do not doubt your lordships would yield to the opinion of the country, otherwise the machinery of Government could not be carried on."

The establishment of a periodical examination for nurses, Gynæcological and Maternity, was fully explained in my Inaugural Address a year ago—it will suffice then now simply to state that such examinations have been carried out by your Board of Examiners, quarterly ; that the Examinations have consisted of written papers, the questions for which have been published from time to time in our Journal, and a *vivâ voce* examination, in which we have been aided, as to practical work, by several Matrons of hospitals who have willingly given their help in this matter. I may state that your examiners have been well pleased with the high standard of the knowledge of their profession which the majority of the candidates have shown.

So far as to work done during the past year : but I would draw attention to the cases, five in number, of sclerosis of the ovary that have been brought forward as indicating a field for further investigation and research. And first of all, I think, we should clear the ground as to the etiology of the disease, whether it is a "cirrhosis" or "sclerosis," and then proceed to map out the leading symptoms with the view to a correct diagnosis, and thence to the prognosis and treatment.

My own view is that they represent two separate conditions, and I think the specimens we have had brought before us during the year tend to confirm this position—

for in *cirrhosis* we find the interstitial stroma first of all the seat of an inflammatory process, and afterwards so contracting as to render the envelope convoluted, so that it presents an appearance not unlike the convolutions of the brain, whereas in *sclerosis* it is the envelope that is the chief seat of the abnormal thickening and induration, leading (as also in the case of cirrhosis) to contraction of the organ and to consequent dysmenorrhœa.

Death has not dealt very hardly with us during the past year, but we have sustained a serious loss in the death of our renowned Honorary Fellow, Dr. Theodore Gaillard Thomas, of New York. He was born in 1832 and died February 28, 1903. He was the author of a valuable work on gynæcology and had a great reputation as an operator.

Dr. W. E. B. Davis, of Birmingham, Alabama, was run over by a train and killed on February 24, 1903. He was formerly a Fellow of the Society.

On August 1 there also died Dr. J. Griffiths Swayne, of Bristol. He was one of the Foundation Fellows of the Society. He enjoyed for many years a practice as the leading obstetrician in the West of England, and his book on "Obstetric Aphorisms" has been highly appreciated.

I must not omit to mention the honour the King has conferred on one of our distinguished Fellows, and a Past-President of the Society, in giving Sir Arthur Vernon Macan, brother of our Editor, a knighthood; an honour on the reception of which I am sure all the Fellows will unite with me in congratulating him.

I cannot conclude without thanking very heartily the two Secretaries, Dr. Swanton and Dr. Aarons, who have afforded me the greatest possible help, and whose urbanity and readiness have not a little contributed to the small modicum of success that may have attended my occupancy of this honourable Chair.

And now, in vacating this Chair as your President, I may be permitted to congratulate the Society on having elected as my successor so distinguished a Fellow as Dr.

John William Taylor, M.Sc., Professor of Gynæcology in the University of Birmingham, and Surgeon to the Birmingham and Midland Hospital for Women. Professor Taylor is renowned not more for his operative skill than for his accuracy of diagnosis, the thoroughness of his research, and the value of his published works; and I am convinced that the Society, in thus electing him President for the ensuing year, has taken a step that can but result in the furtherance of the objects for which it was founded.

I am glad that in relinquishing the office to which your kindness elected me I am not saying "Farewell," but only, in our London vernacular "So long," trusting that in the future I may still have a share in upholding the honour and well-being of the Society whose welfare I have so much at heart.

Professor JOHN W. TAYLOR, the President-elect, said that it was to him a great pleasure to propose a vote of thanks to the President, not merely for the Valedictory Address they had just heard, but for his admirable conduct in the Chair during the past year. Of all the original Fellows of the Society he believed that none had been a more constant attendant at their meetings, or had the interests of the Society more closely at heart than Dr. Heywood Smith, and no one could fail to appreciate the patience, wisdom, and courtesy with which he had discharged the onerous duties of the office of President of the Society, while all would join in cordial wishes that he might long be spared to take part in their proceedings and give them the benefit of his presence and counsel.

The vote of thanks having been carried by acclamation, Dr. HEYWOOD SMITH, in acknowledging it, expressed the pleasure it had been to him to serve the Society.

NEW FELLOWS.

THE following medical practitioners were elected Fellows of the Society at the meeting on December 10, 1903.—

Arnold, Samuel Carnelly, M.B., C.M.Edin., 73, Kingston Crescent, Portsmouth.

Foley, Thomas McCraith, L.R.C.P., L.R.C.S.I., 5, Queen Street, Scarborough, Yorks.

Freund, John Alfred, M.D., M.R.C.P., L.R.C.S.I., 375, Calle Urquiza, Rosario, Argentina.

Highmoor, Richard Nicolson, M.B., C.M.Edin., Litcham, Swaffham, Norfolk.

Kerr, John Martin Munro, M.B., C.M., F.F.P.S.Glasg., Obstetric Physician Glasgow Maternity Hospital: 28, Berkeley Terrace, Glasgow.

Mailer, William, M.B., C.M.Edin., Holmwood, Palace Gates Road, Wood Green, N.

Molesworth, Major William, I.M.S., M.B., B.S.Durh., M.R.C.S., L.R.C.P., c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.

Rayner, David Charles, F.R.C.S.Eng., Assistant Physician Accoucheur Bristol General Hospital, 9, Lansdown Place, Victoria Square, Clifton, Bristol.

Simson, Henry James Forbes, M.B., C.M., Edin. F.R.C.S. Edin., M.R.C.P.Lond., Assistant Physician Hospital for Women, Soho Square, W.

Tweedy, Ernest Hastings, F.R.C.P.I., Master of the Rotunda Hospital, Dublin.

BRITISH GYNÆCOLOGICAL SOCIETY.

NURSING EXAMINATIONS.

AN examination for the Nursing Certificates of this Society was held on December 3 and 10, 1903. The written part was conducted in Bristol, Gloucester, Brighton, Kingston-on-Thames and London, on the former date, and the *viva voce* portion at St. John's House, Norfolk Street, Strand, on December 10.

The following were the examination papers:—

GYNÆCOLOGICAL NURSING EXAMINATION.

- (1) Describe fully how you would prepare a patient for amputation of the breast.
- (2) Describe the nursing of a patient who has been operated on for ruptured perineum.
- (3) To what points would you specially direct your attention in nursing a patient for the first twelve hours after an abdominal operation had been performed on her?
- (4) Describe fully your method of administering a vaginal douche. What fluids are most usually employed for that purpose?
- (5) How would you prepare a patient for an operation on the cervix; and what subsequent nursing is usually required?
- (6) How would you prepare: (a) Glycerine plugs?
(b) Swabs or sponges for an abdominal operation?

MATERNITY NURSING EXAMINATION.

- (1) What are the duties of the nurse immediately after the completion of labour?
- (2) At what period does the umbilical cord usually separate? And what are the accidents which may occur during its separation?

(3) What are the most frequent causes of purulent ophthalmia in an infant? What routine precautions would you adopt to prevent its occurrence?

(4) How would you know if an infant is born "tongue-tied," and what might it be necessary for you to do?

(5) What are the most usual causes of a rise in the temperature and pulse during the first week after labour?

(6) What is a rigor? If the patient is seized with one during the first week after labour what would you do before the doctor arrived?

The following candidates passed the examination and received the Certificate for Gynæcological Nursing:—

Miss Eliza F. Armstrong, certificate St. Bartholomew's Hospital (four years).

Miss Ellen M. Attenborough, certificate Guy's Hospital (one year) and certificate Brighton Hospital for Women (three months), L.O.S. Certificate.

Miss Kate Ethel Barling, certificate St. Bartholomew's Hospital (four years).

Miss M. Fry, certificate Bristol General Hospital (one year) and certificate Clapham Maternity Hospital (two months).

Miss Katharine Kerr, certificate Guy's Hospital (one year) and certificate City of London Lying-in-Hospital (three months).

Miss Florence Selby, certificate Birmingham Work-house Infirmary (three years) and four years' special work in Birmingham Gynæcological Homes.

Miss Agnes H. Withers, certificate Gloucester General Infirmary (three years) and certificate Brighton Hospital for Women (three months).

The Maternity Nursing Certificate was obtained by Miss E. M. Attenborough and Miss M. Fry and also by Miss Ellen M. Dickson, certificate Charing Cross Hospital (three years) and certificate British Lying-in-Hospital (one month).

ORIGINAL COMMUNICATIONS.

NOTES ON A CASE OF HERMAPHRODISM.

By Sir HECTOR CLARE CAMERON, M.D., &c., &c.

Professor of Clinical Surgery in the University of Glasgow.

A YOUNG man, aged 27, an engineer by trade, who had been married for three years, but had no family, was sent to me by Dr. Henry E. Jones, of Govan, on account of very severe relapsing pain in the right iliac region.

The first attack occurred when he was 13 years of age : he then suffered very severely indeed, and was confined to bed for a week. There was no recurrence of this pain until three or four years ago, but since that time similar attacks had become increasingly frequent, and altogether he had had thirteen or fourteen. They were not accompanied by sickness, local swelling, or fever, and the pain was always referred to a spot in the abdomen corresponding pretty accurately with the situation of the vermiform appendix, while during the attack there was always great tenderness at that spot. The distress usually lasted for two or three days.

I was quite at a loss to account for this severe and recurrent pain. The question of appendicitis, or of some form of appendicular colic was raised, but the symptoms were far from complete ; indeed pain, so extreme as to require the use of morphia, was the only symptom ever complained of, and neither Dr. Jones nor myself felt very hopeful of finding that the trouble was due to a diseased appendix. However, as the patient assured us that his life was not worth living under the existing circumstances.

he was admitted under my care in the Glasgow Western Infirmary in May, 1901, and I performed the usual operation for the removal of the appendix. I found it quite free from any evidence of former inflammation, and, though unusually long, it was apparently in all respects quite healthy; however, I removed it and closed the abdominal wound. That evening and on the following morning the patient was unable to pass water and required the use of the catheter, and my house-surgeon reported that, in using the instrument, he had noticed that the right testicle was undescended. On inspecting the external genital organs, I found that the left testicle was in the usual place in the scrotum, but that the right one was not present either in the scrotum or in the groin. The patient himself appeared never to have discovered or noticed its absence until we drew his attention to the fact. I naturally concluded at once that the retained testicle was the cause of the pain, but for various reasons determined not to interfere further by operation at that time. He made an uninterrupted recovery, and was dismissed on July 13, 1901. The state of matters was explained to him, and he was informed that on the recurrence of his pain he should return in order to have the retained testicle removed.

He was readmitted to the hospital on November 16, 1901. Then he told us that, since his discharge, he had had one of his painful attacks each month, with almost absolute regularity, and, usually, lasting for twenty-four hours. From circumstances in which I was then placed, some delay occurred in dealing with his case, and on December 8, 1903, I had the opportunity of observing him during one of his attacks. The pain was so excruciating as to cause him to moan and roll about in bed, while his appearance was that of a person somewhat faint and collapsed. The whole of the right iliac region was very tender; there was no swelling to be felt, but the abdominal wall was tense and resisted palpation; there was neither sickness nor fever. In forty-eight hours he was again quite well.

On December 16, 1901, I opened the abdomen by a longitudinal incision along the outer border of the right rectus muscle, and on introducing my left hand through the wound at once grasped and brought into view a round, firm little body, which was clearly a uterus, and attached to it on the right side there was a well-developed ovary and Fallopian tube, with a richly fimbriated extremity. I could not find any appendages on the left side of the uterus, which seemed to be about as long, but not so broad, as a normal virgin womb. It was indeed very narrow. If a normal uterus were bisected longitudinally, and the cut surface thoroughly rounded off, one would have a body of very much the shape it presented. As I could not make out anything definite regarding its relations to other parts at its cervical extremity, I thought it prudent not to attempt its removal; so, after taking away the ovary and Fallopian tube, I closed the wound, which healed without any trouble, and in a week or so the patient had quite recovered.

In the light of what was discovered at the operation, a thorough examination of the patient's body was now made, and the following facts were elicited in spite of much modesty and reticence on his part. Both of his breasts were like those of a woman in size and shape, with large nipples surrounded by a dark areola. They gave to one's hands grasping them the distinct feeling of mammary glands, and not merely that of masses of fat. We then learned, for the first time, that during each attack of pain the breasts became full and enlarged, and were so very tender that he could hardly tolerate the weight of the bedclothes upon them. His penis was well formed, and, I should say, of more than average size; the prepuce was full, of normal shape, and could be readily retracted. The scrotum was unsymmetrical, being deficient in fulness on the right side, as may often be observed in a young man with an undescended testicle; it was usually somewhat lax and pendulous. A very distinct pigmented

raphe in the skin extended from the preputial orifice along the lower surface of the penis over the scrotum and perineum, without any break in its continuity. The body in the scrotum was testicular in form and consistence, and sensitive to firm pressure; the shape of the epididymis could be easily felt, and the cord could be traced up to the external inguinal ring; in the erect posture a distinct varicocele was observed in the cord. The pelvis was of normal male shape, and on rectal examination I discovered, as I think, an undoubted prostate gland, which seemed to be normal in size and shape, but was situated unusually low down, so that the finger reached it just within the internal sphincter. His thighs and legs were very hairy; and hair, which, however, he habitually shaved, grew strongly on his face. His voice was distinctly soft, but not markedly feminine in quality. He stated that erection of the penis was complete and strong, and that he had regular intercourse with his wife in what he believed to be a perfectly normal manner. He was quite sure that an emission occurred at the end of the sexual act. Before marriage he had sometimes had emissions during sleep, but very seldom.

It has been suggested that, in spite of its appearing to be a testicle, the body in the scrotum may really be another ovary. But that supposition is contradicted by the fact that although, during his severe attacks of abdominal pain, his breasts became markedly enlarged and tender, no change in size or feeling ever occurred in this body in the scrotum. Moreover, I could not feel any broad ligament or other attachment of appendages on the left side of the uterus; and since the removal of the ovary and Fallopian tube from his abdomen he has had no pain or other indication of menstrual disturbance.

Dr. Robert Muir, Professor of Pathology in the University of Glasgow, reported as follows on the parts removed: "On naked eye examination, the structure in every way resembles a normal ovary, with its Fallopian

tube in position. The ovary is of normal shape and size, and shows a number of small depressions on its surface. The tube is of normal thickness, and the fimbriation of its outer extremity is well marked. On microscopic examination, the stroma of the ovary is comparatively cellular, and contains a few Graafian follicles with well-preserved ova. There is also, in one of the sections made, a structure which indicates an old, sclerosed corpus luteum. There is, therefore, no doubt that we are dealing with a true ovary. A section through the Fallopian tube shows a mucous membrane presenting an arrangement characteristic of that of the normal tube, with epithelium quite healthy in appearance."

I may add that my colleague, Professor Muir, has of course preserved the ovary and Fallopian tube, as well as the sections which he made of them. They were shown at a meeting of the Glasgow Medico-Chirurgical Society on March 21, 1902, and the case was mentioned in the report of the meeting in the *Glasgow Medical Journal*, vol. lviii., 1902, p. 278.

I had an opportunity of seeing the patient's wife when she was visiting her husband; she was a good-looking young woman, and was evidently very solicitous about him; she indicated that her married life was a very happy one.

[The case of Simon alluded to on p. 263 is the same as that of Garré quoted by Dr. von Neugebauer on p. 227. The Editor regrets his mistake.]

SHOULD AN EXAMINATION BE MADE IN LABOUR DIRECTLY AFTER THE BIRTH OF THE HEAD, TO ASCERTAIN WHETHER THE NAVEL STRING IS ROUND THE CHILD'S NECK?

By Professor B. S. SCHULTZE, Jena.

IN nearly all recent text-books of midwifery, practitioners and midwives are enjoined to ascertain in every normal labour immediately after the head is born whether the navel string is wound round the neck of the child, and if such should be the case, to pull down the loop far enough to pass it over the head, or, at all events, so loose that the shoulders can pass through it, and if this should prove impossible, to cut the cord. The object of this injunction is to avert injury to the child. That the winding of the cord round the neck does endanger the child, no one, so far as I know, denies. It is a condition found in about every fifth case of childbirth, and some very instructive statistics upon its effects in head presentations were published by Gustav Veit,¹ who in a series of 2,250 of such presentations found that the cord was round the neck of the children in 442, and that 1 child in every 7 was born asphyxiated, and 1 in every 63 dead, compared with 1 in 25 and 1 in 92 of the other 1,808 cases. The danger to the child is therefore proved.

As to the way this danger comes about three points have to be considered:

(1) The coil round the neck. It cannot be denied that if the cord goes right round the neck, and is also too

¹ Veit, Professor Gustav, *Monatsschr. f. Geb.*, xix., 1862.

short to allow such a loop, the loop may, as the child is extruded, be drawn tight, and by compressing the cervical vessels may interfere with the blood supply of the brain.

(2) The pressure which the cord exercises in such cases it has also to submit to, and so by the diminution of the calibre of its own vessels the placental respiration is decreased.

(3) Compression of the cord between the anterior pelvic wall and the neck of the child towards the end of the period of expulsion, is undoubtedly in the vast majority of cases the factor most dangerous to the child.

According to G. Veit, Naegele was the first to declare expressly that the third factor was the one upon which the danger of the cord round the neck essentially depended. But I have found that the same view was stated by Elias von Siebold.¹ Veit considers that this view is confirmed by his statistics, and in this I agree with him. The difference in the duration of the period of expulsion, especially in the time for which the cord may be exposed to pressure between the symphysis and the neck of the child, corresponds pretty closely to the difference in the danger to the child due to cord round the neck in the labour of a primipara and in that of a woman who has borne other children.

Veit's figures are :

	PRIMIPARÆ		MULTIPARÆ	
	Asphyxiated	Still-born	Asphyxiated	Still-born
Cord round the neck ...	1 : 6	1 : 41	1 : 10'4	0 : 156
Cord not round the neck ...	1 : 21	1 : 78	1 : 41	0 : 140

¹ v. Siebold, *Lehrbuch der theoretische Entbindungskunde*, 3 Aufl., 1812, p. 409.

In first labours, according to these figures, asphyxia of the child was three and a half times, and still-birth twice as common when the cord was round the neck as when it was not so. In multiparæ asphyxia of the child was a much rarer occurrence—still it occurred four times as often when the cord was round the neck as when it was not so, though no still-birth was due to the condition. The figures suggest an interference with the placental respiration, not commencing until towards the close of the period of expulsion, and less prolonged in multiparæ than in primiparæ; that is to say, they correspond with the third factor in the danger to the child from cord round the neck above-mentioned.

Some statistics from the Dorpat Klinik, published by Bruttan in 1894, also indicate that in primiparæ the cord round the neck not infrequently leads to the death of the child; but in multiparous women very much oftener merely to asphyxia.

In regard to the third danger above-mentioned: As soon as the head is born the cord is relieved from the pressure to which it was submitted behind the symphysis; the placental circulation is no longer interfered with. Conditions exist under which there is reason to suppose that any such asphyxia, as may possibly have just begun, will not get any worse, but, more probably, will be relieved.

In regard to the first and second dangers: When in any case of labour there is, from previous experience, any reason to anticipate asphyxia, or if any suspicious symptoms or signs of congestion are to be noticed on the head when it is born, unless the expulsion of the child is promptly completed by the contraction of the uterus, we should, as a matter of course, at once proceed to extract the shoulders quite independently of the cord being round the neck or not. In my opinion, therefore, we do not at that time gain anything, as regards the indications, by ascertaining whether the cord is round the neck or not.

Moreover, if, as is enjoined, we should pass the finger into the loop in order to drag on and enlarge it, we must necessarily exercise compression on the cord. Even if we succeed in enlarging the loop, nothing is gained except the proof that it did not require loosening ; if we cannot enlarge it and therefore proceed, as recommended, to divide the cord, we have to admit that it would have been time enough to do that during the birth of the shoulders. The exceptional cases in which any impediment to delivery of the shoulders is caused by a cord round the neck are, as de la Motte pointed out, characterised by such definite symptoms that there is hardly any need, as far as diagnosis goes, to make any examination as to whether the cord is round the neck or not, and moreover it is self-evident that if for any unknown reason the expulsion of the shoulders be delayed, the fingers must be introduced to find out what is wrong, or without finding that out to terminate the delivery.

Briefly, as far as I see, the diagnosis that the cord is round the neck gives us, at the time when the head has just been born, no motive to determine the indications : loosening the coil at this time is at least superfluous, and its division premature. It is impossible to ascertain, directly after the birth of the head, whether the cord is round the neck without touching the mucous membrane of the genital canal of the woman with the fingers. The birth, even of the head, gives rise to lacerations of the canal, though perhaps only superficial ones, and this more particularly at the introitus vaginæ, which is the part the fingers touch ; and at that time one of the midwife's or accoucheur's hands has just been engaged on the perineum, and is therefore probably besmirched with *bacillus coli*. The other hand no doubt has been properly disinfected, but touching the genital mucous membrane of a parturient woman, even with a well disinfected hand, is to be done as seldom as possible, and never at all unnecessarily. It is therefore important to consider whether

it is absolutely necessary to interfere with the genitals of a woman at a period of labour at which, of the 5,000 women who are every day brought to bed with normal head presentations in Germany, the majority have recent lacerations.

These considerations make it doubtful to me whether we are justified in teaching that medical men, or the midwives who conduct 95 per cent. of the labours, should ascertain, directly the head is delivered, whether the navel string is round the neck; whether in any labour up to that time normal it would not be better to postpone any thought as to the cord being round the neck until the shoulders emerge and bring the cord with them if it should happen to be round the neck.

REVIEWS.

HANDBUCH DER GEBURTSHUELFE. . . In drei Baenden herausgegeben von F. von Winckel, in Muenchen. Erster Band, I Haelfte, mit zahlreichen Abbildungen im Text und auf 21 Tafeln. Large 8vo, xii. and 657 pp. Wiesbaden: J. F. Bergmann. Price 13.60, half bound 15.60 marks.

It is some years since the publication of this work was promised, and the instalment now issued shows that it will be at least as important for obstetricians as the magnificent handbook of J. Veit has been for gynæcologists. It has been too generally supposed that in midwifery, nothing new remains to be said, but, as von Winckel points out in his preface, there is hardly any branch of medicine in which more has been recently acquired, as, for instance, in regard to fertilisation, the implantation of the ovum, the origin of the syncytium, the lower uterine segment, ectopic gestation, eclampsia and puerperal fever; there is, indeed, scarcely any question in the art of obstetrics that has not been affected by recent research.

The collaborators that von Winckel has chosen to assist him in the formidable task of reviewing, and, as it were, codifying, all that has been published on midwifery since the appearance of Peter Mueller's encyclopædic work, fifteen years ago, include thirty-three of the most distinguished specialists in Germany, Austria, Russia and Switzerland, but in the present moiety of the first volume only five authors are concerned. von Winckel himself leads off with a review of the history of gynæcology from

the earliest times, illustrated by eighteen interesting portraits, but only brought down to the year 1800 and not dealing in any way with the French or British Schools; this history, however, is to be completed in the future part of the work. Strassmann, of Berlin, writes the first two chapters on the anatomy and physiology of pregnancy, including that of menstruation, ovulation, the true and false corpus luteum, the process of fertilisation and the changes in the ovum which immediately succeed it.

Pfannenstiel, of Giessen, in Chapter III., deals with the first changes in the uterus consequent upon impregnation, the implantation of the ovum, the formation of the placenta, membranes and umbilical cord, and the further changes that take place in these structures during gestation. In Chapters IV.-IX., Goenner, of Basle, describes the further development of the fruit in the womb, the infant at term, the umbilical cord, the placenta and the liquor amnii, and then discusses the nutrition and metabolism of the embryo and foetus.

von Rosthorn, of Heidelberg, in Chapter X., discusses the changes in the maternal system during pregnancy as regards the blood, the pulse, the heart and its action, and the circulation; and metabolism, and the effects of gestation upon the thyroid gland, skin, bones, teeth, and joints. In Chapter XI. he describes the changes in the genitalia, in the size, form, consistence, position and attitude of the womb, and in the musculosa and mucosa in the peritoneum, in the lower uterine segment and in the portio; in the blood-vessels, lymphatics and nerves; in the ovaries and tubes; in the vagina, especially as regards its bacterial flora, and, finally, the various alterations that take place in the mammary glands.

Goenner commences the next section of the book, "The Symptomatology of Pregnancy," with chapters upon the symptoms in the genital organs during the successive months of gestation, the slighter troubles affecting pregnant women, and the situs (*Lage*), positio (*Stellung*), and

habitus (*Haltung*) of the child, that is to say, the relation of its long axis to that of the womb, of its back to the mother's abdominal wall, and of its trunk to its head and extremities—three points included in the term *Lagerung* and not always correctly rendered in English. In the two remaining chapters von Winckel describes obstetric auscultation, and discusses the duration of pregnancy.

We have purposely abstained from anything like detailed criticism ; in a work of this kind, written by various authors, there must of necessity be more serious discrepancies than such as placing the literature sometimes at the end and sometimes at the beginning of a chapter. The slight sketch we have given of the subject matter, and the reputation of the editor in chief and his collaborators, will ensure a welcome for the work, and make it indispensable as a work of reference in every medical library. We may add that, though not such an *edition de luxe* as Professor Bumm's Outlines, it is thoroughly worthy of the fame of its publisher. The illustrations are numerous and very well chosen ; we have been particularly struck with the execution of those in the text, especially of many of the microscopic sections.

ESSENTIALS OF PELVIC DIAGNOSIS, WITH ILLUSTRATIVE CASES. By E. STANMORE BISHOP, F.R.C.S.Eng., Hon. Surgeon to the Ancoats Hospital, Manchester, &c. ; with an Appendix on Examination of the Blood by C. H. MELLAND, M.D., M.R.C.P., &c., Hon. Physician to the Ancoats Hospital. Demy 8vo, pp. xii. and 297. Bristol : John Wright and Co. London : Simpkins, 1903. Price 9s. 6d. net.

Diagnosis must, no doubt, be learned clinically ; but, as Mr. Bishop points out, it is a great help to the student to have some idea of the plan by which he is to be taught, and a clear notion of what he will be called upon to observe. In the text-books on medicine, as a rule, the only instruction in diagnosis is given on the inductive principle—the

disease is made known before the symptoms ; while in practice the very opposite obtains, and the disease has to be deduced from the condition of the patient.

Mr. Bishop's object is to assist his readers in acquiring systematic habits of orderly observation and logical deduction. After discussing the methods of diagnosis, including the use of the hands and instruments, the positions in which the patient may be placed, and the significance of pain, in the first of the five parts into which the book is divided, he proceeds in Part II. to lay down the lines upon which the observer should be guided, and so upon objective evidence divides the various affections of the male or female pelvis into five classes, these classes into groups, and again these groups into sections. The sections include nearly 400 pathological conditions, and it is noteworthy in how few instances, comparatively, any assistance has to be sought from the anamnesis or statements of the patient. In Part III. Mr. Bishop has given a series of diagnostic tables, in which a more comprehensive view may be taken of the entire class, group or section of pathological conditions to which a case may belong, and this part is likely to be found particularly useful for reference, as, if any affection is suggested, it may be at once referred to here by consulting the index. Part IV. contains a number of cases taken from actual practice illustrating Mr. Bishop's methods, and interesting not only in themselves, but because the various symptoms in each are discussed and explained.

In regard to surgical interference, it is in abdominal inflammation that the white blood count has been most useful ; the amount of hæmoglobin also is of serious import especially as regards extrauterine hæmorrhages and the possibility of tiding over a critical minimum by transfusion and stimulants, and also in the choice between a general and a local anæsthetic. Dr. Melland's admirable appendix on the Examination of the Blood is therefore a valuable addition to Mr. Bishop's work, which, for the

rest, we can thoroughly recommend to those who, in feeling the necessity of system, have begun to acquire it. It will perhaps be most valuable to those responsible for the education of others.

GYNÆCOLOGY. A TEXT-BOOK FOR STUDENTS AND A GUIDE FOR PRACTITIONERS. By WILLIAM R. PRYOR, M.D., Professor of Gynæcology in the New York Polyclinic Medical School, &c., &c. With 163 illustrations, demy 8vo, pp. xvi. and 380. New York and London : D. Appleton and Co., 1903.

It is a pleasure to read this book, for on every page there is internal evidence that the author writes from extensive personal experience, and has very decided opinions, which he expresses clearly and concisely. The work is divided into two parts of nearly equal length; the first, after describing the methods of examination, deals with the diseases of women and their treatment, including those of the urinary tract; while the second part is devoted to the description of the operations in vogue at the present time, or specially recommended by the author. Much prominence is given to non-operative as well as to operative treatment; and the author's eclectic conservatism, which leads him to advocate conservative surgery in adnexal disease, and to strongly condemn operation for displacements before due trial of other measures, and the extirpation of myomata without urgent indications, does not deter him from the radical treatment of ectopic pregnancy in all but exceptional cases, the removal of all ovarian tumours, or from panhysterectomy when both tubes and ovaries have to be removed for pelvic suppuration. The book is well printed and beautifully illustrated, and is, for the student, an admirable introduction to the study of the diseases of women. It will be a welcome addition to the library of the practitioner, but hardly merits the name of a text-book.

A PRACTICAL TEXT-BOOK OF THE DISEASES OF WOMEN.
By ARTHUR H. N. LEWERS, M.D., F.R.C.P.Lond.,
Senior Obstetric Physician and Lecturer on Midwifery
in the Medical School of the London Hospital, &c.
&c. Sixth Edition, with 166 illustrations, 4 coloured
plates and 74 illustrative cases. Cr. 8vo, pp. xviii.
and 533. London: H. K. Lewis, 1903. Price 10s. 6d.

This is a good example of Lewis's Practical Series. It is well written and well arranged, and the illustrations are particularly instructive and well selected. Moreover, its value to the student is greatly increased by the illustrative cases. Differential diagnosis has been given due prominence, and we may point particularly to the tabular statement of the various forms of hæmorrhage at the end of the excellent chapter on "bleeding" and to the chapters on fibroid and ovarian tumours. The work has been thoroughly revised for this edition, the operation of extra-peritoneal abdominal hysterectomy for fibroids has been omitted in favour of intraperitoneal, or, as we prefer to call it, retroperitoneal treatment of the stump. The author has also omitted, as obsolete, Apostoli's method of dealing with these growths by electricity, but has drawn special attention to fibroids beginning in the cervix as of special importance and requiring special procedure. Myomectomy is dismissed with less consideration than we believe it merits, even admitting the high mortality when the cavum has to be opened. In regard to carcinoma of the cervix, Dr. Lewers repeats the statement in his recent monograph that when a radical operation has been indicated, he has recently preferred vaginal hysterectomy. The indications for operations in ectopic pregnancy, in its early stages, are hardly discussed, and those at or near term inadequately. v. Winckel has shown (*ante*, p. 29) that the prospects of the full term ectopic foetus are not to be entirely neglected. As the induction of premature labour is touched upon, some reference might have been made in regard to the rapid dilatation of the cervix, to

Bossi's instrument and its modifications, while to be quite up to date Dr. Lewers might have adduced absolute proof that chorion epithelioma does occur independently of pregnancy (*ante*, vol. xvii., p. 201).

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods, Other than Drug Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M., M.D. Volume viii.—Rest, Mental Therapeutics, Suggestion. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia, &c., 332 pp. Price \$2.50.

We have had much pleasure in drawing attention to several of the previous volumes of this series, and have read the present one with great interest and some disappointment. The application of rest in therapeutics is confined almost, if not altogether, to the grand neuroses: neurasthenia, hysteria and hypochondria, and functional and organic nervous diseases; the only exceptions we have noticed being the use of supports in sciatica and local traumatic palsies. If Dr. Dercum had been familiar with the classical work of Hilton on Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Disease, we think he would have approached his task in a broader spirit and given us a better book. From his point of view, not unnaturally, his ideas of rest, are practically those which lead up to and include the Weir Mitchell Treatment; but he lays due emphasis upon the exclusion of factors in fatigue, and on the benefit and even efficiency of partial rest in certain cases, while he insists on the absolute necessity of isolation and rigorous discipline in others, more especially in the severe forms of neurasthenia and hysteria.

The section on mental disease consists of two chapters only, the first on the prevention of insanity and the general

principles of the treatment of the insane, which contains much valuable information clearly conveyed, will be useful to any general practitioner. The second chapter, on the special forms of mental disease, naturally can give merely a sketch of some of the more important types, especially as nearly half of it is devoted to alcoholism and drug intoxications. In this chapter, as in the earlier part of the work and earlier volumes of the series, it has very naturally been found impossible not to describe in some detail the adjuvant treatment by medicines, and we find no fault with the fact, but "other than drug giving" in the series title might better have been omitted.

Part III., on "Suggestion," we can hardly praise too highly. Distinguishing direct from indirect suggestion, Dr. Dercum points out that the former is most efficacious when the statements made are moderate; that it is most valuable in hysteria, less so in neurasthenia, and least of all in hypochondria; and that as a rule general or indirect suggestion only should be employed in neurasthenia. He also lays stress on the benefits of suggestion as an adjuvant in functional and even in organic nervous diseases, and we would ourselves include all others, at all events as regards cheerfulness on the part of the medical attendant. The last chapter is devoted to suggestion by mystic and religious methods and by hypnotism, and will well repay perusal not only from the interesting historical facts related, but because of the calm and scientific spirit in which the various methods are criticised, especially hypnotism. We entirely concur with the author that hypnotism is merely an induced hysteria, and that the legitimate field for its therapeutic use is extremely limited indeed.

KRITISCH-EXPERIMENTELLE STUDIEN ZUR KLINIK DER
PUERPERALEN EKLAMPSIA, von Dr. EMIL POLLAK in
Wien. Royal 8vo, pp. viii. and 172. Leipzig und
Wien: Franz Deuticke, 1904. Price 4 marks.

Whether eclampsia is accepted as a disease in itself or merely as a complex of symptoms of most various origin,

there is, as the author of this important monograph points out, no admissible evidence that the condition known as eclampsia is ever met with except during the period between conception and the end of the puerperium. The mortality attending it has, happily, thanks to the possibility of rapidly terminating the labour under anæsthesia without eliciting reflex excitement, been greatly diminished in recent years, and much has been ascertained in regard to the pathological anatomy of both mother and child, but the etiology of the condition is still purely hypothetical; there has certainly been no lack of earnest and painstaking research; so many theories have been put forward that the pineal gland will soon be the only organ remaining upon which to build a new one, but of the pathogenesis of eclampsia our knowledge is sadly disproportionate to the time and labour expended in vain.

After a sketch of the views on the etiology down to the first suggestion, by Schroeder, of an anæmia of the brain the result of contraction of the blood vessels due to intoxication, Pollak arranges the more recent theories according to whether they refer the symptoms to the (1) maternal, or (2) foetal system, or (3) to the septum dividing the two. A critical discussion of these theories leads him to conclude that we are no nearer the solution of the question whether the phenomena in the uropoietic system are the consequence, or the cause, of the syndromata of eclampsia, than at the time Lever, of Guy's, first reported upon albuminuria in puerperal convulsions.

In the second part of the work Pollak reproduces *post-mortem* records taken in the Vienna Pathological Institute subsequent to those published by Schauta, and analyses these records in comparison with other statistics. In the third part he gives the results of his own experimental researches upon syncytiolysis, which, like those of Wormser (*infra*, Summary, p. 205) are entirely negative. He is sceptical as to the modern theories of immunity leading to

any solution, and considers that up to the present time the most probable hypothesis is that eclampsia is due to the intoxication of the maternal system by albuminoid poisons produced by regressive metamorphosis in the foetus. We heartily recommend this well-arranged and comprehensive essay as a sound exposition of the present state of this very difficult question.

A MANUAL OF OBSTETRICS. By A. F. A. KING, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D.C., and in the University of Vermont, &c. Ninth Edition, Revised and Enlarged. Crown 8vo., pp. xxiv. and 622, with 275 Illustrations. New York and Philadelphia: Lea Brothers and Co., 1903. London: Henry Kimpton, 1904. Price 12s. 6d.

This Manual was designed by Professor King as a groundwork for his own students at the beginning of their obstetric studies. The advances in medical science have necessitated a gradual increase in its size, so that the ninth edition is now half as large again as the fourth, and in the course of its revision the chapter on "Septicæmia" has been remodelled and in great part rewritten, and in it are discussed not only the general infections of childbed, sapræmia, septicæmia and pyæmia, but the acute local infections the genitalia may be the seat of during the puerperium.

A careful examination of the entire work enables us to say that it justifies its popularity as being a sound and comprehensive manual for the student, and a useful work of reference for the busy practitioner; more Professor King does not claim for it. Due importance is given to aseptic precautions in the palpation of the abdomen, and indiarubber gloves are recommended, especially when the

physician has recently been in contact with septic cases. In the consideration of ectopic pregnancy total abortion is not distinguished sufficiently from tubal rupture. A remarkable instance of abdominal pregnancy after the removal of the body and part of the neck of the womb, conception being due to a fistulous opening in the cervix, is mentioned, which we do not remember to have seen.

The pagination of the body of the work commences with 17 instead of 1, the title date is a year later than it ought to be, and the price half-a-crown more than in America, points that, though the book is a good one, will not commend it to English purchasers.

PUBLICATIONS RECEIVED.

We are obliged to postpone further notice of the following Publications received :—

- FROM JOHN BALE, SONS AND DANIELSSON, LTD., OXFORD HOUSE, W. :
Vaginal Tumours with Special Reference to Cancer and Sarcoma, by W. ROGER WILLIAMS, F.R.C.S. Demy 8vo, pp. viii. and 92, with 5 illustrations. Price 5s. 6d. net.
- FROM J. AND A. CHURCHILL, 7, GREAT MARLBOROUGH STREET, W. :
A Short Practice of Gynæcology, by HENRY JELLETT, M.D., B.A.O., F.R.C.P.L., &c., ex-Assistant Master Rotunda Hospital, &c. Second edition, revised and enlarged, with 223 illustrations. Demy 8vo, pp. xiv. and 406. Price 10s. 6d.
An English Handbook to the Paris Medical School, by A. A. WARDEN, M.D., Visiting Physician to the Hertford British Hospital, Paris, 1903. Price 2s. net.
- FROM FERDINAND ENKE, STUTTGARDT :
DIE BEKAEMPFUNG DES UTERUSKREBSSES, ein Wort an alle Krebs Operateure, von Dr. GEORG WINTER, Ord. Professor und Director der Universitaets-Frauenklinik in Königsberg, i., Pr. Large 8vo, pp. 76, 1904. Price 2 marks.
- FROM HENRY J. GLAISCHER, 57, WIGMORE STREET, W.
Charles White, F.R.S., A great Professional Surgeon and Obstetrician of the Eighteenth Century, by CHARLES J. CULLINGWORTH, M.D., F.R.C.P., &c., with notes and illustrations. Demy 8vo, pp. viii. and 56. Price 2s. 6d.
- FROM L'INSTITUT INTERNATIONAL DE BIBLIOGRAPHIE SCIENTIFIQUE, 93, BOULEVARD SAINT GERMAIN, VI^e, PARIS.
La Gastro-enterostomie, Histoire générale, Méthodes opératoires, les cent cingnante premières opérations de la Clinique Chirurgicale, d'Angers, par A. MONPROFIT, Professeur de Clinique Chirurgicale a l'Ecole de Médecine, Chirurgien de l'Hotel Dieu d'Angers, &c., &c. Cr. 8vo, pp. xvi. and 376, over 300 figures dans le texte, 1903. Price 15 francs.

FROM REBMAN, LIMITED, 129, SHAFTESBURY AVENUE, W.C.:

Surgical Diseases of the Abdomen, with special reference to Diagnosis, by RICHARD DOUGLAS, M.D., formerly Professor of Gynæcology and Abdominal Surgery, Medical Department, Vanderbilt University, Nashville, &c., &c. With 20 full-page plates. 8vo (9.5 by 6), pp. 884, 1903. Price 30s. net.

The Practice of Obstetrics, designed for the Use of Students and Practitioners of Medicine, by J. CLIFTON EDGAR, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, &c. With 1,221 illustrations, many of which are printed in colours. Large royal 8vo, pp. 1,112. 1903. Price 30s. net.

Practical Gynæcology: a Comprehensive Textbook for Students and Physicians, by E. E. MONTGOMERY, M.D., LL.D., Professor of Gynæcology, Jefferson Medical College, &c., Philadelphia. Second edition, revised. With 539 illustrations, mostly from original sources. Royal 8vo, pp. xxxiv. and 884. 1904. Price 25s.

Progressive Medicine: a Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences, edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, &c., &c., assisted by H. R. M. Landis, M.D., Assistant Physician to the Medical Dispensary of the Jefferson Medical College, &c., &c. Vol. IV. December, 1903. Large 8vo, pp. viii. and 444, plates and illustrations. Price 15s. (Annually, 52s.).

FROM WILLIAMS AND NORGATE, 14, HENRIETTA STREET, COVENT GARDEN, W.C.:

Pathologie und Therapie der Rachitis, von Dr. WILHELM STOELTZNER: I. Assistenten an der Kinder-poliklinik der Kgl. Charité, und Privatdozenten an der Universitaet zu Berlin. With 3 plates, pp. 176, royal 8vo. Berlin, S. Karger, 1904. Price 4s. net.

FROM JOHN WRIGHT AND CO., BRISTOL (Simpkin, Marshall, Hamilton, Kent and Co., Ltd., London):

Ailments of Women and Girls, by Florence STACPOOLE, Lecturer for the National Health Society and for the Councils of Technical Education. Crown 8vo, pp. viii. and 238. 1904. Price 2s., boards.

TRANSACTIONS OF THE NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY, Fasciculi, v., vi., 1903, and i., 1904.

We have also to acknowledge the following reprints:

The Effect of the Midwives' Act of 1902 on Irish Training Institutions and Nurses. Inaugural Address of the President of the Obstetrical Section of the Royal Academy of Medicine in Ireland (Professor A. SMITH, M.D.), with a full report of the Discussion.

FROM Dr. KURT KAMANN, Assistant Physician in Professor A. Martin's Private Hospital in Griefswald:

Report of the Proceedings of the Tenth Congress of the German Gynæcological Society in Wuerzburg, 1903.

Report on the Literature of Prolapse Operations for the Years 1900 to 1902.

Apparent Abdominal Pregnancy in a Rabbit.

Apparent Abdominal Pregnancy in a Rabbit after Primary Rupture of the Uterus.

Delivery at Term after Abdomino-vaginal Suture of a Complete Rupture of the Uterus by violence.

Skull Injuries in the New Born.

On Congenital Goitre and the Enlargement of the Thyroid in Children born presenting the face.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.

MAY, 1903.

ON THE USE OF IODO-BROMO SALINE BATHS IN GYNÆCOLOGY.

MANGIAGALLI (*Der Frauenarzt*, 1903, April 24), in an address to the National Congress of Hydrology and Climatology, at Milan last year, laid great stress on the importance of limiting the use of the iodo-bromo saline baths to suitable cases.

In many instances the physician has to deal with constitutional disease much more serious than the gynæcological complication for which his advice is sought. Catarrhal affections in particular are often a severe test of the gynæcologist's acuteness as well as of his knowledge of pathology and balneology. In uterine catarrh, persons of great nervous irritability often derive more benefit from mineral waters of an indifferent type, while patients who are anæmic or debilitated by severe operations or prolonged infectious processes improve greatly under hydropathic treatment and alkaline chalybeate baths or such as contain arsenic. But in any affections associated with an irritable condition of the alimentary canal, waters containing arsenic or salts of iodine should not be employed, but rather such as contain carbonic acid or are of an indifferent type. Iodine baths are also contraindicated by the presence of vesical trouble; for such cases carbonised lithia waters are generally suitable. In uterine catarrh complicated by skin disease benefit will sometimes be derived from waters containing sulphur and arsenic.

The ascertained existence of gynæcological trouble is therefore by no means sufficient in itself to justify the prescription of baths containing iodine salts, and as the gynæcologist cannot escape the responsibility of deter-

mining whether there are any indications for balneotherapy and, if so, what waters should be advised, his examination of his patient must be comprehensive and complete. An extreme specialist becomes a bad specialist, in so far as he neglects general pathology for his own particular branch of study.

Dysmenorrhœa, of the so-called mechanical type, is relieved by the iodine saline baths, but is equally so by waters of an indifferent kind; for amenorrhœa due to exhaustion, alkaline chalybeate or arsenical baths will prove beneficial, but for amenorrhœa associated with obesity the iodine baths are extremely useful; and the iodine baths are also indicated for fibromata, especially in the earlier stages of their development, and in those common forms complicated by adnexal disease.

It is, however, in exudative processes, whether of the adnexa, or pelvic peritoneum, or due to affections of the parenchyma of the uterus, tubes or ovaries, that the iodine saline baths have had their greatest triumphs, to understand and explain which we have to invoke the aid of resorption, and indeed make very great claims upon it.

In regard to pregnancy, Mangiagalli has never seen any bad effect from the iodine baths even in women who underwent a prolonged cure, indeed he denies the possibility of any such effect as might cause abortion, provided that the cure is carried out with the requisite prudence, especially as regards the temperature, which should not exceed 37° C., and that douching and irrigation of the vagina is avoided.

On the other hand, in the menopause he deprecates the use of any strong mineral waters, which, by inducing congestion of the uterus, may interfere with the natural course of events, and lead to the recurrence of menstruation or other hæmorrhages that had ceased. Nevertheless, in regard to the nervous disturbances of the climacteric and the obesity which so often supervenes thereon, he thinks no treatment more likely to be beneficial than the iodine saline baths at a density not exceeding four degrees (s. g., 1028).

The question naturally arises whether, in any forms of disease, it is possible, or perhaps indicated, to set aside orthodox rules and permit or even prescribe the continua-

tion of the baths during menstruation. Ovarian affections, hyperplastic salpingitis, chronic parametritis, parenchymatous metritis, without profuse menstruation, are diseases in which the baths are most advisable, and in these affections, and also in dysmenorrhœa, not only in that associated with disease of the tubes and ovaries, of the parametrium or perimetrium, but also in cases of purely nervous origin, or which are at all events not connected with any serious genital lesion, Mangiagalli has always adopted this plan with great success, as also in membranous dysmenorrhœa, and that of chlorotic damsels with imperfectly developed uteri.

But in uterine catarrh, particularly in hæmorrhagic endometritis, as well as in those affections commonly met with by every experienced gynæcologist which may be classed as "sequelæ of pregnancy," he advises that the course of baths be interrupted during menstruation. In patients with fibromata, the bath during menstruation is a relief, indeed it often appears to have a decided hæmostatic effect; but certain conditions are indispensable, and the greatest caution is required; the temperature of the bath should be 39° or 40° C., instead of the usual 37° , the duration should be short, from ten to fifteen minutes, and the patient should go to bed immediately afterwards, and he advises, after half an hour, have an injection of ergot.

In chronic exudative processes, Mangiagalli cannot recommend the baths during menstruation without precautionary restrictions; the process must not be recent, there must not be the least elevation of temperature, and the fever must have been absent for some considerable time. Moreover, cases in which there is abscess formation must be excluded, and this is not always easy, for pathological anatomy has taught us that small foci of suppuration are not uncommonly present in the pelvis even in indurated masses of exudation, and, though generally in process of involution, may not have lost all their virulence. If such foci were present, the use of baths during the catamenia might easily revive inflammatory processes that apparently had died out.

It is, therefore, desirable in many cases of this category that the patients should make systematic use of the clinical

thermometer. Even a slight rise of temperature in an exudative form of gynecic disease is not merely a contra-indication against the bath during the period, but points to an interruption of the course, though possibly for a short time only. Great prudence is always necessary, but with the above restrictions, Mangiagalli feels warranted by his experience in declaring that in chronic exudative processes, whether parenchymatous, peritoneal or parametric, unaccompanied by feverish symptoms, by evident or latent suppuration, or by any results of tubal pregnancy, the use of the baths during menstruation is beneficial. Endeavouring to explain why this should be so, he says: "The process of menstruation is no longer considered to be merely a local one. Whatever relation it may hold to development, menstruation is now admitted to be intercalated in a cyclic process which, lasting about a month, is characterised by a periodical increase and decrease in all the bio-chemical processes of the system, and all the functional activity of the pulse, temperature, muscular force, blood pressure and nitrogenous excretion. In the ebb and flow of this functional activity, and in the curve that may be taken to represent it, menstruation occupies the lowest point, the dead low tide, the period at which the conditions for the alteration and resorption of an exudate are at their worst. Under these conditions, the bath, by increasing the blood pressure and promoting metabolism, may act as a corrective to the depression in the functional activity."

Most of the observations upon which the foregoing opinions are founded were made in relation to the very valuable saline waters at Salice, in the valley of the river Staffora, on the foot hills of the Ligurian Apennines, some eight kilometres from Voghera, one hour from Milan and two from Turin and Genoa. This chalybeate water, which is one of those containing chloride of sodium, iodine and bromine, has a specific gravity of 1066, and there is a daily supply from five artesian wells of upwards of 26,000 gallons.

[The Salice water approximates that of Salzomaggiore in richness, as regards iodide and bromide of magnesia, but contains far less solid matter (chloride of sodium, &c.), as appears from their comparative density (1066 and 1120).

The place is little known, and is not mentioned in Baedeker's Northern Italy or any guide book we have been able to consult, nor marked on ordinary maps. No doubt Professor Mangiagalli's address will lead to its being much visited as soon as accommodation is provided for patients.]

THE RELATION BETWEEN UTERINE AND GASTRIC DISEASES.

TUSZKAI OEDOEN (*Amer. Journ. Obst.*, 1903, March), drawing attention to the close reciprocal relation between uterine and gastric troubles, and to the intimate anatomical connection between the nerve paths of the uterus and the stomach, says that a genital examination should be made of every woman complaining of digestive disturbances, and quotes cases illustrative of the cure of long-standing gastric trouble by attention to some uterine disorder. Although the gastric affection is usually secondary to the genital one, it must be borne in mind that the two may be merely coincident. He summarises the facts concerning the direct nervous connection between the stomach and the uterus, as follows: The genital centre is not in the brain or spinal cord, but in the sympathetic system. The ventral centre of the sympathetic system is the solar ganglion, by means of which, through the inferior hypogastric plexus, the uterus is brought into reflex association with the anterior and posterior gastric plexuses. Reflex paths are found in the spermatic, pudendo-hæmorrhoidal, cutaneo-cavernous, utero-celiac, and utero-spinal anastomoses. Moreover, more direct reflex paths exist in those nerves which, without entering the solar plexus, connect the vagi with the sympathetic system, and more especially with the utero-vaginal plexus and the parauterine ganglia. The stomach and genital organs are brought into sympathy, not only by reflex nervous action but by virtue of their being, by the influence of variations in intra-abdominal pressure. Dislocations of the stomach may cause uterine displacement by altering the centre from which the intra-abdominal pressure radiates. Primary displacement of the uterus, however, produces secondary gastric neuroses or actual disease through the nerve connections between the two organs. The circulation of the blood does not play

an important part in the reciprocal action between the organs.

J. F. J.

GENITAL AFFECTION OF THE ORGANS SIMULATING GALL-STONES.

FRANK, Cologne (*Monatss. f. Geb. u. Gyn.*, Bd. xvii., S. 14), reports a case which was shown, examined and discussed at the Cologne Gynæcological Society on May 2, 1902. Pregnancy in a rudimentary horn, or in a retroverted uterus with an ovarian cyst, or extrauterine with an ovarian cyst, were all thought of in the differential diagnosis, but finally an incarcerated tumour in the pelvis was accepted as a subserous fibroma, a tense elastic tumour reaching above the pelvis as the gravid uterus, and a nodule thereon the size of an apple as a fibroma also. The patient was extremely debilitated, and between four and five months pregnant. She had in June, 1901, undergone operation for gall-stone, on account of violent vomiting, severe colicky pains in the gastric region and intense tenderness of the entire abdomen, but no gall-stones were found. She had a feverish recovery after the operation and all her old troubles gradually returned with increased severity.

The incarcerated tumour was removed piecemeal by the vagina on May 22, after division of the perineum. The operation was done without accident and gave great relief, but the woman aborted and sank on the fourth day. Five other cases are briefly given in which operation for gall-stone was actually done, or resolved upon, for pains in the gastric region and other trouble, which afterwards proved to be due to affections of the genital organs.

VAGINAL CYST REMOVED DURING THE PUERPERIUM.

COUVELAIRE, Paris (*Ann. Gyn. Obst.*, Mars, 1903), reports: A primipara, of 35, was admitted to the Clinique Baudeloque on August 9, 1902, four days before her labour, and it was found that when she was made to strain, an oval fluctuating tumour, as large as a hen's egg, protruded through her vulva. This tumour was covered with pale smooth mucous membrane, with fine vascular arborisations; its base extended from a little below the os, somewhat to the right of the posterior median line, to within two centimetres of the fourchette, and under pressure its con-

tents seemed to disperse into the surrounding parts ; rectal examination showed that it was independent of the bowel. During labour the tumour did not present itself before, nor could it be felt by the finger behind, the head ; it seemed to have been dispersed by the dilatation of the vagina, and the child was born without any incident of importance. The patient was discharged on the thirteenth day. She returned thirty-three days after her confinement, and the tumour, which was found to have increased in size and firmness, was removed with its mucous covering, and she left the clinic on the twelfth day, perfectly well. The tumour was found to be a cyst containing a thick, fibrinous, slightly opalescent fluid which would not flow through a small cannula. Its inner wall histologically consisted of (1) a stratified layer of pavement epithelium, (2) a basement membrane of variable thickness, (3) a musculo-vascular layer. Couvelaire thinks it better not to interfere with such cysts during pregnancy ; should they offer any obstruction to delivery they should be opened freely with the knife and afterwards dealt with according to circumstances.

P. Z. H.

LARGE VESICO-VAGINAL FISTULA WITH ALMOST TOTAL
DESTRUCTION OF THE URETHRA : COMPLETE RESTORA-
TION OF FUNCTION.

BERNDT, Stralsund (*Monats. f. Gcb. u. Gyn.*, Bd. xvi., S. 875) reports : In a sextipara of 36, labour, after lasting five days, and several fruitless attempts to deliver the child, a brow presentation, with the forceps, had to be terminated by perforation ; urine was discharged involuntarily directly the child was born, and there was found to be an enormous vesico-vaginal fistula extending almost the entire length of the urethra, of the lower wall of which there was left merely a strip, 3 to 5 cm. broad, bridging over the external orifice. The accident was completely remedied by two operations. In the first place, the bladder was detached from the vagina in Mackenrodt's way, and by drawing forward the posterior margin of the defect in the bladder, a tongue-shaped flap was formed that not only made good the defect of the vesical wall but also sufficed to cover the posterior portion of the urethral canal, and this flap healed by first intention. At the second

operation a new urethra was formed by making two quadrilateral flaps from the anterior vaginal wall and the adjoining surface of the labia minora, turning one over so that its mucosa converted the urethral gutter into a closed tube, and covering it with the second and larger flap, so that the wounded surfaces were in contact. Healing by first intention. The result was brilliant; continence was completely restored; the patient had not to get up at night, and in the day-time could hold her water, when sitting, for from four to five hours, and when going about and hard at work, for from two to three. The bladder held about 13 ozs. (370 cm.) comfortably, and could be voluntarily emptied in a powerful stream. The extremely ingenious and skilful method of operating is illustrated by clear diagrams which are worth looking at in the original.

MENSTRUATION AND CORPUS LUTEUM.

LINDENTHAL, Berlin (*Wiener kl. Wchns.*, 1903, No. 11), at an ovariectomy noticed that, during the preliminary examination, a fresh follicle had been ruptured and hæmorrhage had taken place from it in consequence. The woman up to that time had always menstruated normally, but the succeeding period was atypical. In discussing the rôle of the follicle in menstruation, in connection with this observation, he suggests that the amenorrhœa met with after unilateral ovariectomy may be accounted for by the ovary removed being the one which should have given the impulse for the next menstruation. The two ovaries seem to have an alternating function, for which there must exist some regulating cause. The loss of one ovary is not always compensated by the vicarious action of the remaining one. Possibly, in the rupture of a follicle, some chemical process happens, the products of which are the exciting cause of the next ovulation and menstruation.

SINGULAR CASE OF SENILE INVERSION OF THE UTERUS, WITH REMARKS UPON THE OPERATIVE TREATMENT OF THIS DISPLACEMENT.

V. FELLEBERG, Bern (*Beiträge z. Geb. u. Gyn.*, Bd. vi., Heft 3) reports: In a woman who for twenty-one years had had a prolapse of the vagina as large as a fist, a total inversion of the uterus had gradually developed. This he

suggests was probably owing to the tension of the inverted vagina dilating the os and to the small soft senile uterus yielding to pressure from above. Colpectomy was performed, the uterus pushed up into the wound, and the introitus vaginæ stitched up, but the wound re-opened and the uterus again prolapsed. The projecting corpus was amputated, sutures, previously inserted, were knotted over the stump, and the remainder of the corpus retired spontaneously and the woman was cured.

Mueller performed the same operation also, in case of an inversion that arose in labour, in a patient whose extreme weakness and anæmia rendered more extensive interference inadvisable; twelve catgut sutures were passed through the corpus, the fundus was then amputated and the sutures knotted over the stump, the latter was returned into the vagina, and kept there by a tampon; at the end of ten days the stump was completely reinverted. The advantage of this operation over total extirpation lies in preserving uterine mucosa capable of its function.

INTRA-ABDOMINAL SHORTENING OF THE ROUND LIGAMENTS FOR POSTERIOR UTERINE DISPLACEMENTS.

SIMPSON (*Amer. Journ. Obst.*, 1903, February) describes a new operation that he has successfully performed for retrodisplacements of the uterus. It consists essentially in changing the course of the round ligaments from a transverse to a nearly antero-posterior direction, and in shortening the ligaments so as to leave the distal ends slack, the proximal ends being used to control the movements of the uterus. These changes are effected beneath or by puckering the parietal peritoneum, thus leaving no bands of adhesion. The steps of the operation are outlined thus: After any necessary operation on the lower genital tract, such as curetting, repair of the cervix or perineum; a median abdominal incision is made just above the pubes, and any adhesions of the uterus are freed or lesions of the adnexa attended to. The round ligament is then grasped by a delicate forceps one inch from its uterine attachment and drawn up to the surface of the wound, and a silk suture is passed through the ligament at this point in such a way as to include about an inch of that structure in its grasp, and to encircle about three-fourths of its circumference.

The needle is taken off and both ends of the suture are passed through the eye of a carrier. The peritoneum is incised just below and in front of the round ligament. The carrier is inserted and passed directly forward, immediately beneath the peritoneum of the vesico-uterine pouch, to a point on the anterior abdominal wall just above Poupart's ligament, and emerges an inch and a half to the side of the median line. When both ends of the suture have been grasped and the carrier withdrawn one of the ends is threaded on a sharply curved needle, which is passed into the abdominal wall so as to include peritoneum, muscle and fascia, and again emerge into the cavity. The two ends of the suture are now tied. The ligament is drawn into and along the subperitoneal channel made by the carrier. When the other ligament has been treated in the same way the uterus is held in normal anteversion.

J. F. J.

INTRAMURAL EXTRAPERITONEAL ANCHORAGE OF THE ROUND LIGAMENT.

G. H. NOBLE (*Amer. Journ. Obst.*, 1903, February) has altered his technique for this operation, and by using the transverse in place of the vertical incision, obtains a stronger cicatrix and diminishes the danger of abdominal hernia. The steps of the operation are as follows: (1) A transverse incision is made, one and a half inches above the pubes, down to the recti muscles and extending to their outer edges; the recti are separated vertically in the median line and the peritoneum opened in the same direction; local pathological conditions in the pelvis are seen to and the uterus is raised. (2) With light forceps one of the round ligaments is grasped about the middle of its intraperitoneal portion; by traction on the forceps the uterus is pulled somewhat to that side of the pelvis which is opposite the ligament held, the peritoneum is drawn away from the region of the internal abdominal ring, and the ligament made taut so that it may be the more readily recognised in the extraperitoneal manipulations to follow. (3) Just beyond the outer edge of the rectus, at the end of the transverse incision, the point of a pair of artery forceps is thrust through the posterior sheath of the muscle, but does not enter the abdomen. The forceps is opened and withdrawn,

so that an aperture large enough to admit the index finger is left. The finger is introduced into the subperitoneal fat and feels the round ligament without difficulty, for it is brought into prominence by tension on the forceps which holds its uterine end. (4) The finger, passed through the opening, is hooked under the extraperitoneal portion of the ligament from below upward, and draws it up into the wound. The sheath of the ligament is then split open by blunt dissection. The sheath and the peritoneum are stripped back in the direction of the uterus, completely divesting the ligament of its covering. It is then drawn out of the wound, and forceps, slipped underneath, retain it, until the opposite ligament has been raised and denuded in the same way. If the uterus has been in marked retroversion, the ligaments will have become so attenuated as to allow their approximation in the median line in front of the recti, which approximation will restore the uterus to its normal position. (5) The peritoneum of the median incision and the recti muscles are closed with continuous kangaroo or catgut sutures. (6) The ligaments are approximated in front of the recti and tied together. (7) The cut edges of the aponeuroses are stitched together. When one or two loops of the suture have been passed, the needle, in crossing the interval between the two edges, is made to pass through the ligament. This process is continued as each successive loop is passed until the centre of the incision is reached, when the free end of the suture is clamped and left long. Starting from the other end of the transverse incision a second strand of kangaroo tendon unites the edges of the aponeurosis on that side and picks up the round ligament. The kangaroo tendons are tied together and the ligaments are thus embedded and firmly anchored between the aponeurosis and muscles, where they contract extensive adhesions.

Noble has done this operation sixty-seven times with most satisfactory results. It has great advantages in that the strong uterine end of the ligament is used, the abdomen is opened and any adnexal disease can be diagnosed and attended to; it does not interfere with pregnancy; it is more permanent than other methods; the fixation is extraperitoneal and therefore leaves no intraperitoneal adhesions.]

J. F. J.

ON THE REMOVAL OF INFLAMED OVARIES AND
OVARIAN TUMOURS BY VAGINAL CÆLIOTOMY.

HEINSIUS, Greifswald (Hegar's *Beitragce z. Geb. u. Gyn.*, Bd. xviii., Heft 1), states that in the University and Martin's private kliniks, since 1899, not less than 700 cœliotomies have been performed upon all sorts of indications, and in 110 instances parts of the adnexa were removed on account of chronic or acute suppuration, tuberculosis (5), cysts, fibroma (2), embryoma (3), carcinoma (1), and sarcoma (1). In several instances the patients had undergone a previous abdominal section, seven had suffered one and one patient two, previous cœliotomies. Five cases died, but the tumours were suppurating ones in three of these. The Greifswald technique is described, and the absence of any abdominal scar, the more favourable recovery, and the dispensation from any abdominal support, are claimed as being great advantages for the vaginal operation.

THE TECHNIQUE OF VAGINAL HYSTERECTOMY IN CASES OF
PELVIC INFLAMMATION.

PRYOR, New York (*Amer. Gyn.*, February, 1903) in a well illustrated article gives details of his operative procedure and statistics of his later and greatly improved results. The patient is placed in the old lithotomy position, with her legs flexed in Clover's clutches, on a table constructed so that the head can be lowered and the intestines will not prolapse into the vagina, and that the stumps can finally be inspected in the Trendelenburg position. The incisions he generally makes are: first, an anterior, and secondly a posterior, crescentic cut enclosing the cervix, but not quite meeting at either end. He finds Segond's lateral extensions, Duhrssen's anterior and Henrotin's posterior longitudinal cuts seldom necessary unless the vaginal vault is contracted, but Henrotin's is useful to ensure the drainage of a deep peritoneal pouch from the bottom. The incisions are best made with stout scissors, the cautery knife may consume valuable time. Douglas' pouch may be entered by mouse-tooth forceps and scissors, or better by pushing the finger through the peritoneum while the cervix is held by stout three-pronged forceps; but the peritoneum may be too thick to give way to the finger, or difficulty may arise

from an ectopic gestation in the broad ligament, or a retro-peritoneal fibroid may have to be removed as a preliminary measure. A methodical examination of the pelvic contents is made as soon as the peritoneal cavity is opened through the posterior pouch, or when this is impossible, after the bladder has been separated from the uterus in front. In effecting the latter an intra-uterine traction forceps devised by Pryor will be found useful not merely in fixing a soft and small uterus, but also in the differentiation of uterine from vesical tissue. In most cases by using the flat edge of the closed scissors like a periosteum elevator, the bladder can be peeled away as high as the level of the internal os in a moment; after that is done the detachment is completed with the fingers. Here also a strong peritoneum may require to be opened with scissors. On the anterior face of the cervix, an aberrant vessel anastomosing from one of the uterine arteries (generally the left) with the inferior vesical, may in puerperal and fibromatous cases be very large, and should always be secured; the azygos artery, except in such cases, seldom requires even forcipressure, but may be tied also. The openings in the peritoneum should be enlarged laterally with the fingers to the same size as those in the vaginal walls; the intestines may be prevented from protruding by gauze pads, or by lowering the patient's head.

Hemisection is invariably a step in the operation; after, or even before, the opening of the anterior pouch, the anterior wall of the cervix is divided with scissors as high up as it can be seen, usually as far as the reflexion of the peritoneum. An assistant then holds the edges of the wound apart and the operator seizes the cervix at each side of the apex of the cut, draws it down, and exposes part of the anterior wall of the uterus covered by peritoneum; this he splits in the median line and repeats the process, twice or oftener, till the cornua of the uterus appear below the incision. He then passes his finger in the middle line up behind the uterus till its tip can be seen or felt above the fundus, withdraws the finger and passes up in its stead a specially devised grooved director until it shows beneath the anterior vaginal retractor. The posterior retractor is then withdrawn and the bisection of the uterus completed by means of a special bistoury with a convex cutting edge.

When the right half of the uterus has been returned into the pelvis and all retractors withdrawn, the left is pulled out of the vulva, and, with his left hand introduced into the vagina up to the thumb, the operator can deal with the higher adhesions, and if necessary, after introducing retractors, separate them under the guidance of his eye.

When a tubo-rectal fistula is known to exist, that tube is dealt with last. After the left tube and ovary are so free that they can be brought below the bladder into the vagina they are released, and with the left half of the uterus returned into the pelvis. The right half of the uterus is similarly dealt with by the operator's right hand.

When one half of the uterus is released there is free bleeding, but if he tries to put on forceps before the adnexa are liberated, the surgeon will probably be unable to secure the ovarian arteries outside the ovaries and will have to be content with an incomplete operation.

Hæmostasis.—With the forefinger on one side and the middle on the other of one broad ligament, while the thumb powerfully doubles the uterus and holds the adnexa, the pedunculated mass is brought forward out of the vagina, and from above downwards, a forceps grasping the upper part of the broad and the round ligament is placed upon the ovarian artery. When this forceps has been locked, and its handles removed, the tissues are divided to its ends and another forceps embraces the rest of the pedicle, including the uterine artery, and the uterus and adnexa are cut away. The procedure on the other side is the same. Anterior and posterior retractors are then introduced, with lateral blades to hold back the forceps and stumps, and several gauze pads having been passed into the pelvis to take up the blood and discharges, the operator carefully inspects the stumps, identifies the four cardinal vessels, and assures himself that there is no bleeding.

The dressings must be arranged so that the stumps, which will slough, will remain in the vagina after the forceps are removed; moreover, the dressing must isolate the field of operation from the peritoneal cavity and be adequate to absorb all discharges. It is at this point that Pryor's technique differs most from the French procedure. The perineum is depressed with Pean's narrow retractor, the anterior vaginal wall elevated with Pryor's own trowel;

the gauze pads are removed, and the forceps drawn down till the stumps are in the vagina, and are kept in that position while a piece of iodoform gauze is adjusted between each set and the vaginal wall. By means of long and narrow retractors the forceps (and gauze) are held firmly against the vaginal wall, and enough gauze, folded in strips, is introduced between the forceps to create a strong outward pressure. The gauze extends beyond the tips of the forceps so that the instruments do not touch the intestine, bladder or any of the soft parts at all. A self-retaining catheter is introduced; the sphincter ani is dilated to lessen the spasm of that muscle and the levator ani. The forceps are removed in forty-eight hours and the catheter six hours later, after washing out the bladder.

Pryor has determined by repeated dissections that if the bladder is entirely detached from the uterus and elevated, while the perineum is pressed backwards, down-traction upon one half of the uterus removes the cervix and its vessels away from the ureter.

In a tabular form he completes the 1901 report of his cases, making in all 284, including operations for fibroids, with one death (No. 186), a mortality of 0.4 per cent. He has never found it necessary to split the perineum, and would prefer laparotomy to doing so; it is, however, sometimes necessary to lubricate the hand before it can be introduced.

CÆLIOTOMY DURING PREGNANCY.

CARSTENS (*Amer. Journ. Obs.*, 1903, March) reports 21 cases of abdominal section performed upon pregnant women. The cases were as follows: Appendicitis, 5; fibroids, 4; hernia, 1; abdominal hysterectomy, 1; ovariectomy, 3; vaginal hysterectomy, 3, and miscellaneous, 4. There were five deaths. The three cases of vaginal hysterectomy were for cancer of the cervix complicating early pregnancy. He considers that in the pregnant woman all acute diseases requiring prompt operation can be dealt with just as well as if no pregnancy existed. Tumours likely to interfere with labour should in all cases be operated upon, as there is far less danger in removing them during pregnancy than in non-interference and letting the woman go to full term. Tumours above, or which can be shoved

above, the brim of the pelvis, need not be interfered with ; it must, however, be borne in mind that all tumours take on a rapid growth during pregnancy. J. F. J.

ON DRAINAGE.

OLSHAUSEN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. xviii., Heft 1), opposes drainage after gynæcological operations save in exceptional cases, such as paratyphlitic abscesses and suppurations in the broad ligaments and bottom of Douglas' pouch ; among 1,555 successive laparotomies only nine were drained, on the other hand, 113 of those operations which he selects as the most serious operations, and which might be esteemed as most liable to post-operative sepsis, were treated without drainage. Save in the exceptions mentioned, he considers drainage rather dangerous than useful. The statistics he offers show that cases apparently the most unfavourable often enough recover without any fever, though undrained.

SIPPEL (*Centralb. f. Gyn.*, 1903, No. 6), criticising Olshausen's article, suggests that many of the fatal cases mentioned in it might have recovered if they had been drained, and advocates washing out the abdominal cavity with warm physiological salt solution.

HOFMEIER, Wuerzburg (*Ibid.*, No. 8), replying to Olshausen, points out that he has not, as asserted, drained in 18 per cent. of all cases, but only in 4·5 per cent. He then takes from among his laparotomies of the last two years the most serious and, as regards sepsis, the most dangerous cases, which were 13 per cent. of the whole (30 : 216), and in most of which there were very difficult intestinal adhesions with lesions of the surface of the bowel. Eight of the 30 were treated by drainage, 22 without it ; one only died, and in that one no drain was used. While therefore Olshausen in his serious cases had a mortality of 20 per cent., Hofmeier claims that in similar ones he lost less than 4 per cent. As particularly adapted for drainage, Hofmeier considers those cases in which there are large wound cavities with ragged and infiltrated walls ; in such the danger of abdominal abscess is very great. He prefers the suprapubic way, and glass to gauze on account of the difficulty in removing the latter.

At the discussion of a paper of WALDO's on this subject, in the Obstetrical Society of Philadelphia (*Amer. Gyn.*, November, 1902), the prevailing opinion was that drainage, if necessary at all, should be from below. BOLDT and GRANDIN thought that with a clean abdominal incision drainage was unnecessary. GOFFE, however, said he operated always from below, and always drained.

ACCIDENTS IN GYNECOLOGICAL OPERATIONS.

BLAU, Vienna (*Beitraege z. Geb. u. Gyn.*, Bd. xviii., Heft 1), reports on the above, as they happened in Chrobak's Klinik in 1890-1902. The ureters suffered in fifteen cases; in seven panhysterectomies (five for myoma), three ovariectomies, three vaginal and one sacral extirpation of the uterus for carcinoma, and once in an attempt at vaginal extirpation. One ureter only was wounded in eleven cases, both in four; in three the bladder suffered also. The injured ureter was united end to end in three instances, and implanted once each, into the bladder, rectum and vagina; four of these cases ended fatally. The bladder itself was injured in twenty-one cases, three times with the ureter and twice with the intestine. Of sixteen primary sutures, six ended in death; of the other ten, in which the bladder was completely closed, five healed per primam, vaginal fistulae were left in three and two healed spontaneously after vesical drainage. There were fourteen injuries of the bowel, seven abdominal, seven vaginal; eleven were fatal, and of three intestinal fistulae, two healed spontaneously.

INSTRUMENTAL PERFORATION OF THE UTERUS.

FIEUX and LAFOND (*Rev. mens. Gyn. Obst. Pcd., Ann. Gyn. Obst.*, February, 1902) report the following case. A woman was admitted into hospital seven days after labour, and the retained placenta, which was in a state of putrefaction, was removed by curetting; symptoms of collapse supervened suddenly upon the subsequent intrauterine irrigation, which was immediately stopped. A tampon of iodoform gauze was placed in the vagina and the patient put to bed, but she died four hours afterwards. At the *post-mortem* it was found that the uterus had been perforated, probably by the irrigating sound. The case illustrates the

danger of introducing a sound into a uterus that has been rendered friable by prolonged septic processes.

P. Z. H.

CHORIO-EPITHELIOMA IN MALES.

FISCH, St Louis (*Amer. Gyn.*, 1903, January), at the conclusion of a pathological report on a case of Crossen's writes: "If, with few exceptions, Marchand's teaching of the origin of chorioma has been uniformly accepted to-day, it was reserved for the most recent times to bring in a circuitous way a proof of its correctness, which, from every point of view, must appear unobjectionable. So far, chorio-epithelioma was naturally considered essentially a tumour of females. We owe to Schlagenhauser a classical paper in which we find the description of a series of choriomata in males. Without entering into the details of this fascinating publication, I shall simply say that a number of tumours have been examined in which formations were found not to be mistaken for anything else but syncytial masses. Schlagenhauser had the good fortune to observe such a new formation, and while the other observers, for obvious reasons, only emphasize the very close resemblance of these cell masses to foetal epithelium, Schlagenhauser established their identity with the latter. These tumours are tumours of the testicle, so-called teratomata, meaning new formations containing elements of all the three germinal layers. In these are found masses which, if given to a pathologist without information, would be diagnosed as chorio-epithelioma. They form metastases like the latter. Furthermore, these tumours show now and then the pathologic condition of villus growth which is called hydatid mole. A beautiful instance of this growth was described by McCallum as intra-vascular endothelioma."

"Here, then, in tumours of the testes we have typical chorion epitheliomas and hydatid moles, and from them metastasis occurring in the same way as in the female choriomas after pregnancy. To this class, too, although in a female, belongs a tumour, described by Lubarsch, which was found replacing the right ovary of a girl aged 13, a *virgo intacta* as was ascertained by examination. This tumour also contained typical masses of chorio-epitheliomatous tissue. I need not remark how often the ovaries are the seat of teratomas."

“According to our modern conceptions, so clearly exposed by Wilms, teratomas are embryomas, *i.e.*, tumours arising from tissues of the developing foetus which, during development, have been separated from the normal aggregation. That such segregations (not migrations in Colnheim’s sense) occur, is not any longer a postulate, but has been directly demonstrated by a long series of observations. Dependent upon the time in which this segregation occurs, the formation of the tumours varies, the earliest ones comprising elements of the three mesoblastic layers. If, therefore, in an embryoma, or teratoma, chorionic tissue occurs, the origin of the tumour dates from a time in which embryonic material for the formation of the foetal envelope was formed. This means that we either must assume that the time of segregation was that of the formation of the first divisions of the egg cell (and then we would hardly expect the presence of the foetal envelopments), or that remnants of a second fertilised cell (polar body) at an early period became attached to the growing egg. In other words, that the embryomas really mean inclusions. In these cases, then, the teratoma with chorioma or hydatid mole is not a mixed tumour, after Wilms, but a real embryoma.”

“If this is the explanation for chorion elements in embryomas, we perhaps will not fail to accept Schlagenhauser’s suggestion that the female choriomas, too, are embryomas. tumours in which the segregation of embryonic material has taken place during pregnancy. Against their foetal origin, again and again, has been urged the seeming independence of the time of the appearance of the growth from the time of the last pregnancy, the tumour appearing sometimes two, four, or even eight years after the last pregnancy. We must believe that the main cause of the occurrence of these tumours is not the pregnancy itself, but the fact that during a pregnancy a segregation of embryonal material—either of a normal ovum or of an abortion—has taken place. This material need not be derived from the last pregnancy, but may lie dormant, just as the material forming the other teratomas may lie dormant, for a great number of years.”

[In a note the author mentions that Pick’s paper on hydatid moles in dermoid cysts (*ante*, vol. xviii., p. 201) appeared after the above was written.]

ON PRIMARY CHORIO-EPITHELIOMA OCCURRING OUTSIDE THE SEAT OF IMPLANTATION OF THE OVUM.

ZAGORJANSKI, Kissel (*Archiv f. Gyn.*, Bd. lxxvii., Heft 2), has been able to collect seventeen instances of these new growths, including a second case from Landau's klinik which he examined under Pick's direction and of which he gives a detailed report. Two small nodules of the typical structure of chorio-epithelioma were removed from the vagina of a nullipara who, after an early abortion, suffered from renewed hæmorrhage, rigors and hæmoptysis. Histological investigation of the endometrium and of the tenacious mass of sputum (embedded in celloidin) gave a negative result. The hæmoptysis ceased, the patient recovered, and a year and a half later was again pregnant. The question arises whether in cases of this kind we have to do with the embolic displacement of chorionic epithelium or of an entire villus, and autonomic proliferation of the epithelium at the locus of the embolus, that is to say with a primary tumour (Pick, Schmorl, Marchand, &c.); or with a malignant growth of the placenta, or a mole, the formation of metastases, and spontaneous elimination or retrogressive disappearance of the primary tumour. The author takes Pick's view, and from the consideration of all the cases draws the following conclusions:—Such emboli have been observed in the lungs, brain, kidneys, uterine musculosa, but most frequently in the vagina (seven times out of eleven). No instance of the spontaneous cure of a chorio-epithelioma by autonomic elimination with the placenta or mole has been demonstrated; on the other hand, the possibility of the spontaneous retrogression of chorio-epitheliomatous growths cannot be altogether rejected (*cf.* cases cured without any operation or after a very incomplete one). For chorio-epithelioma to be malignant it is essential that the physiological resistance of the tissues of the body to invasion should be diminished or destroyed; the restoration of that resistance puts an end to the growth of the tumour. In this way, in case of chorio-epithelioma of the vagina and lungs, after the removal of the vaginal growth the lungs may recover spontaneously, and this, in spite of the negative result given by the sputum, we must suppose to have taken place in the case above mentioned.

During pregnancy nodules of chorio-epithelioma in other parts of the body than the uterus and tube, point to the presence of an hydatid mole. Every case of primary extra-uterine chorio-epithelioma after normal labour hitherto recorded has had a fatal termination.

DECIDUOMA MALIGNUM AFTER THE MENOPAUSE.

MCCANN (*Journ. Obst. Gyn. Brit. Emp.*, 1903, March), reports a remarkable case of deciduoma malignum in a woman of 53, who had borne ten children. Menstruation ceased eighteen months before her admission into hospital, and for twelve there was no hæmorrhage. She then had a sudden gush of blood from the vagina and the flow continued for one day, and recurred every four or five until three weeks before her admission, and that so profusely that she was confined to bed while it lasted. On examination, the uterus was found enlarged to the size of a three months' pregnancy, uniform and soft in consistence and freely movable. The passage of a sound under chloroform caused such profuse hæmorrhage that a gauze plug had to be applied to check it. Two days later vaginal hysterectomy. She rallied after the operation, but did not go on well and died on the sixth day from suppression of urine. The entire cavity of the uterus was filled with clot, recent and of old standing. Sections cut at different levels showed new growth between the clot and the uterine wall, some cells penetrating the wall. The microscopical examination showed that the new growth was undoubtedly deciduoma malignum.

ON GRAFT METASTASES AND LATE RECURRENCES AFTER OPERATIONS FOR CANCER.

OLSHAUSEN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. xlviii., Heft 2), a short time ago removed a psammous carcinoma from the abdominal wall of a patient on whom, twenty-one years previously, an ovariectomy had been performed by Schroeder for a tumour supposed to be malignant. The interest of the case lies in the occurrence of the graft metastasis in the abdominal wall and in its taking place at so late a period after the former operation. He relates five other cases in which he has observed tumours in the abdominal wall after laparotomy for ovarian new growths, one

a benign adenocystoma, the others carcinomata. As to the genesis of these growths being from inoculation there can be no doubt, as otherwise tumours of the abdominal wall are almost invariably innocent fibromata, and in these patients the new growths were situated entirely on one side of the scar, the cicatricial tissue forming a rampart against the extension of the growth. This one sided development must depend upon the inoculation of elements of the tumour into the abdominal wall on one side of the wound. The time at which these occurrences in the abdominal wall made their appearance varied in the carcinomatous cases between two and nineteen years, and in the innocent growth was seventeen years.

At the close of his article Olshausen relates three cases in which, after the removal of uteri or an ovary for malignant disease, recurrence appeared as late as four, twelve, and seven years respectively.

ELECTROTHERMIC HYSTERECTOMY FOR CANCER.

In reviewing Reed's "Text-Book of Gynæcology" (*ante*, vol. xvii., p. 167) we drew particular attention to "elytro-hysterectomy," Byrne's operation for removing the whole of the uterus, except a thin shell at the fundus, with an electric knife. This method, in his hands, was followed by such satisfactory results in carcinoma of the uterus, that it is rather remarkable that more attention was not directed to his operation. Nor was electro-hæmostasis, as described by Skene in the supplement to his work on the "Diseases of Women," at all widely adopted.

DOWNES (*Amer. Gyn.*, Dec., 1902) attributes the neglect of electrical methods to the imperfections of the instruments and electrical apparatus till lately available, and has had an improved armamentarium made from his own designs, which includes three angiotribes, varying in the width of their blades, and a cautery knife. Where the electric current is available the acting blade of the angiotribe can be brought to the proper temperature in from ten to twenty seconds according to its size; otherwise a storage battery of 75 ampères hour's capacity will, when fully charged, suffice for three major operations. Downes, pointing to the fact that cancer cases bear the loss of blood badly, and to the paramount importance of efficient hæmo-

stasis in sound tissue, holds that cervical amputation, even with a cautery knife, is logically inferior to a hysterectomy in which the hæmostasis of the broad ligaments and paracervical tissues has been secured by pressure and heat. He has previously reported (*Amer. Med.*, May 24, 1902) two vaginal hysterectomies for adeno-carcinoma of the cervix. After high amputation of the cervix with the cautery knife, he removed the rest of the uterus by bringing the fundus out of a posterior vaginal incision, applying the blades of his electrothermic angiotribe to the broad ligaments outside the ovaries, and dividing the tissues on the uterine side of the angiotribes. The operations were almost bloodless, the patients improved remarkably, and at the time of writing showed no sign of recurrence. Downes now reports three other hysterectomies on patients of his own. In none of the five did he use a single abdominal ligature, though wider dissections were made than usual. He has also operated with his instruments once for B. C. Hirst, and twice for Howard Kelly, and has assisted Noble of Philadelphia in three other operations by the same method—in all, eleven hysterectomies were done by the electrothermic method within a year.

NOBLE, Philadelphia (*Ibid.*), in a paper on the same subject, recommends that the four arterial trunks should be secured by ligature after the division of the cooked pedicles, lest inexperience with the method should lead to secondary hæmorrhage. He has used the electro-cautery clamp in five hysterectomies, and though the number of cases is small, he is convinced that the method has certain advantages. It guards against the oozing hæmorrhages from small vessels which is so annoying in cancer operations, and leaves a dry field to be buried under the peritoneal flaps. The other points he mentions are: (1) Less blood is lost; (2) the lymphatics are sealed up, the risk of septic absorption or implantation are diminished; and (3) more of the broad ligament is removed than by other operations. He holds that in view of the results secured by Byrne and of the theoretical advantages of the cautery clamp over the ligature, it is reasonable to expect that this method will give a larger proportion of cures than the older ones, especially in cancer of the cervix. The very low percentage

of cures of uterine cancer makes it incumbent upon us to give a fair trial to any procedure which, while it does not increase the primary mortality from operation, gives a prospect of better ultimate results.

THE RADICAL ABDOMINAL OPERATION FOR UTERINE CANCER.

GELLHORN, St. Louis (*Amer. Gynæcology*, November, 1902), gives a comprehensive survey of our present knowledge of the anatomical relations of the lymphatic vessels and glands of the female pelvis, of the manner in which uterine cancer extends, of the liability of the lymphatics to be involved in the disease so far as statistics are available to show it, and of the recorded cases in which the radical operation has been performed. While the primary mortality is most important in estimating the value of any operation, it seems to him unjust to throw into the scale against the radical method, still quite a recent one, the surprisingly low mortality of the vaginal method attained after thirty years' experience; the appalling number of deaths in the early cases of ovariectomy might as well be used against that operation to-day. He shows that in about one third of all cases of uterine cancer the regional glands in the pelvis become involved, but very seldom in the incipient stages, or until the disease has more or less advanced and attacked the parametria or other adjacent structures. Under the old methods, recurrence takes place four times out of five in or near the cicatrix in the vagina, and only in the fifth in the glands. The percentage of recurrences has so far not been reduced by the radical removal of the lymphatics, and this partly owing to anatomical and technical difficulties in routine ablation of the glands. Moreover, in very many cases this extremely dangerous procedure has been unnecessary, as there were no diseased glands in the pelvis. Many important points remain undecided by experimental research and practical experience. How often and how early are the glands attacked, which glands are most frequently involved, and by what particular form of the disease? It is only those who control a large material who can hope to elucidate the practical side of the matter, and meanwhile there is no reason for others to adopt the radical abdominal operation as a routine method.

THE X- AND ULTRA-VIOLET RAYS IN INOPERABLE
CERVICAL CANCER.

CLEAVES (*American Gynecology*, November, 1902) reported to the New York Academy of Medicine the following case. A woman of 42, in an enfeebled and cachectic condition, had a foul sanguinolent discharge; her introitus was partially occluded and the vagina filled with friable carcinomatous masses reaching to the fornix: there was ulceration of the vaginal walls and infiltration of the broad ligaments. After the x-ray had been employed 50 times, and the ultra-violet rays 50 times also, with tonics and hygienic treatment, she was subjectively much better and weighed 8 lb. more than ever before; the vulva and vagina were normal in appearance, the cervix, on the right side irregular and elongated, on the left was continuous with the fornix, and except on that side was covered with healthy mucous membrane. There was no infiltration in the right broad ligament, but a cicatrix in the left dragged the fundus towards that side. The uterus, normal in size, was immovable. Neither ovaries nor tubes were palpable, nor could any enlarged glands or pelvic infiltration be detected. COE, who had examined the patient, concurred as to the accuracy of the description of the conditions before and after treatment.

GRUBBE (*Med. Record*, November 1, 1902; *B. M. J. Ep.*, 1903, No. 117), in a report from the Illinois Laboratory, Chicago, gives the following case. A woman, aged 52, underwent hysterectomy for cancer in March, 1900; in the following December she suffered from symptoms of pelvic congestion, and an abscess formed which broke into the vagina, and continued to discharge very offensive matter with occasional profuse hæmorrhages. A second operation was begun in May, 1901, but the surgeon found the cancer had recurred so extensively that he closed the wound without removing anything, and made the prognosis of probable death within a month. Treatment with the x-rays was begun in the last week of May, with daily applications of ten minutes' duration. At the end of two months she had gained 22 lb., was free from pain, and the discharge had almost ceased; at the end of the third month she was discharged symptomatically cured and

remained so at the time of writing, having gained 35 lb. in eleven months. Grubbe insists upon the remarkable effects of the x-rays upon internal cancers, especially in preventing recurrences after operation; even in hopeless, inoperable cases they prolong life, make the patient comfortable and the last hours free from pain.

At the Medical Society of the State of New York (*Amer. Med.*, February 14, 1903), SCULLY spoke of the wonderful relief that he had been able to give an old woman suffering from advanced cancer of the cervix, by three or four applications of the x-ray. Three cases were reported in which quite satisfactory results had followed exposures of about fifteen minutes on alternate days, given by means of an elongated tube adapted for introduction into the vagina or rectum.

At the Liverpool Medical Institute (November 6, 1902), DAWSON TURNER spoke of the benefit derived from the use of the ultra-violet and x-rays in external and internal cancer, both before and after ulceration; recurrence was usual, but the recurrences yielded as before, and a stage was reached at which one or two exposures a week sufficed to keep the disease in abeyance and to remove distressing symptoms.

BILATERAL LIGATURE OF THE HYPOGASTRIC AND OVARIAN ARTERIES FOR INOPERABLE CARCINOMA.

LINDENTHAL, Vienna (*Centralb. f. Gyn.*, 1903, No. 10), reports three cases treated in the way proposed by Kroenig (*ante*, vol. xviii., p. 133). In all three the operation had a beneficial effect upon the hæmorrhage, and the foul discharge though not stopped was diminished, but the progress of the disease was not arrested, and these results agree with those already published in eight other cases. The general conditions of the patients, however, was materially improved, so that the method may be deemed a good palliative in inoperable uterine carcinoma.

HYDROPS TUBÆ PROFLUENS.

INGRAHAM, Buffalo (*Amer. Gyn.*, 1903, February) reports two cases of this comparatively rare affection, otherwise described as salpingitis profluens, or intermittent ovarian hydrorrhœa, &c :—Mrs. M., aged 39, eleven years ago after

a long and severe labour was delivered, by forceps, of a child which lived but a few weeks, and was then ill for months with pelvic cellulitis and phlegmasia dolens. She came under his care seven years ago for endometritis with pain in both ovarian regions. The uterus was enlarged, but in normal position; she had a thick discharge, sometimes thinner, more profuse and tinged with blood, and, for three or four days before her period, she had gushes of thin watery fluid which did not stain her napkin, once to thrice daily, to a total amount of from four to six ounces. This had only been so since her labour, and her periods were normal. The curette and pure carbolic acid cured all but the watery discharge, which, though lessened at first, soon returned in amount varying as before. Examination found the left adnexa normal, the right tube enlarged and as if folded upon itself. For the past four years she has had no treatment; operation which, as her condition was not serious, was not pressed, was declined. In the other case, an unmarried woman of 26, who was of a very constipated habit, sometimes went a week without defæcation and suffered from headaches, but was otherwise healthy, menstruation had begun at 14; the flow was normal with occasionally slight pain for the first day or so; there was no leucorrhœa, but about ten days before each period, for the last three years, she suffered from a sense of fulness and discomfort in the abdomen, especially on the left side, which gradually increased until, usually on the third day before the flow, she had suddenly a profuse watery discharge, sometimes repeated for two or three days in succession; she estimated the quantity at about a quart or more. The sense of fulness then departed till the next month. She was completely relieved by regulating her bowels, but her trouble returned when she again became constipated. Ingraham alludes to the theory that the tube may become kinked like a garden hose, and be closed till the increase of pressure behind the obstruction straightens it out; in any case, the abdominal ostium must be occluded in these cases and the uterine end of the tube shut also from time to time.

MAIER (*American Gynæcology*, November, 1902), reported to the Philadelphia Obstetrical Society two instances

of obstruction of the tube with intermittent discharge ; in one the diagnosis was confirmed by operation. NOBLE insisted on the rarity of the condition, with which he had never met, indeed experience in operating on the various forms of salpingitis would not lead a surgeon to believe that the contents of the tube were often discharged into the uterus. MONTGOMERY mentioned a case in which, without re-examination, a patient was operated on for a cystic tumour which was found to have disappeared ; investigation showed that a tubal sac had discharged through the uterus, and inquiry elicited the fact that there had been a profuse discharge from the vagina shortly before the operation.

TORSION OF A HYDROSALPINX DURING PREGNANCY.

PINARD, Paris (*C. R. Soc. Obst. Gyn. Paed.*, December, 1902) reported the following case. A woman of 36, who had had good health except that she was subject to metrorrhagia, and for the past five years had had occasional attacks of sharp pain in her right iliac region, was seized in her ninth month of pregnancy with intense pain in her right side in the neighbourhood of MacBurney's point. Her pulse was 60 and her temperature 36.8° , but, after four days, vomiting and diarrhœa set in with tympanitis, a pulse of 104 and a temperature of 36.6° , and it was therefore decided to empty the uterus and perform laparotomy ; artificial dilatation was resorted to and delivery was completed under chloroform by means of the forceps. As all symptoms of pain, vomiting and tympanitis had disappeared when she recovered consciousness, the idea of further operation was nearly abandoned, but eventually a median laparotomy was decided upon and was performed by SEGOND, who found a right hydrosalpinx with a twisted pedicle which he removed with the right ovary. Pinard brought this case forward as an illustration of the influence of pregnancy in causing torsion of pedicled abdominal tumours, and to show that when symptoms of peritonitis appear in a pregnant woman the only proper treatment, as urgent as it is necessary, is surgical intervention. In the present instance his decision had been governed by the following considerations: first, that no form of peritonitis is peculiar to the pregnant condition, and secondly,

that after delivery there is always a misleading improvement in the symptoms of appendicitis or of torsion of the adnexa.

P. Z. H.

ON THE MALFORMATIONS OF THE ECTOPICALLY DEVELOPED FŒTUS AND THEIR CAUSES. By F. v. WINCKEL. Wiesbaden: J. F. Bergmann, 1902.

EVERSMANN (*Centralb. f. Gyn.*, 1903, No. 13), reviews this important monograph. The Munich Professor has collected 87 observations, 14 of which are personal, but in this collection 9 cases, in which malformation is mentioned but not particularly described, are not included. The subject is one that has been very imperfectly treated, even in the latest manuals, and the present work will be heartily welcomed by the profession, the more so as it is illustrated by 11 instructive plates, and the available details of the individual cases are arranged in tabular form at the end of the book.

The author describes clearly and in a most interesting manner the various malformations of the foetus, the influence to be attributed to abnormalities of the foetal appendages, especially to those of the placenta, and the various theories that have been advanced to account for the malformations; a prominent rôle is accorded to the action of the tubal musculosa, the effect of which, often as it has been observed, is still unadmitted by many pathologists. The following conclusions which v. Winckel offered for discussion at Munich some time ago are given as the result of his investigations: (1) Deformities of the foetus in ectopic sacs are much commoner than has been supposed, and occur in some 50 per cent. of all cases. (2) The poles of the foetus are most prone to be so affected. (3) The large and resisting head in 75 per cent. (4) The pelvis and lower extremities in 50 per cent. (5) The arms in 40 per cent. (6) Much more rarely, the thorax, abdomen and genitals, in from 3 to 4 per cent. (7) Pressure on the affected parts may lead not merely to changes in form, such as compression, impression, displacements and even fractures and contractions, but also to disease of a serious nature, to hydrocephalus, hydromeningocele, encephalocele, anencephalus, and, as regards the trunk, to omphalocele and spina bifida. (8) As causes of such, want of room in the

sac and deficiency of the liquor amnii are accepted by most authors. (9) The frequency of the presence of amniotic bands and of a velamentous insertion of the umbilical cord supports that view. (10) But no sufficient explanation can be found in those causes alone. The appendages of the fœtus, more especially the placenta which is often very thick and also indurated by effusions of blood, have effects that are not unimportant. (11) Moreover the active condition of the fœtal sac has not hitherto been duly considered; in it, just as in the womb itself during the earlier months of pregnancy, transitory contractions occur, and at the end of the ninth month similar contractions in the form of actual, and often very powerful, labour pains. (12) These contractions may compress the fœtus and its appendages to an extreme degree, so as to gather it up into a ball in such a way that none of its external or internal organs remains quite unaltered. (13) The force of these contractions is exercised especially upon children of great strength and power of resistance; like the pains of the normally pregnant uterus, their strength increases with the increase of the resistance. (14) These contractions are by far the most important factors in all the deformities and diseases of the ectopically developed fœtus. But all the hard parts in the neighbourhood, the vertebræ and the pelvis, the uterus and any hard tumour, also have their effect upon the fœtus. (15) The deformities and diseases affecting a fœtus developed in an accessory horn of a uterus entirely correspond, in nature and degree, to those occurring in a tubal sac, and depend upon the same causes. (16) Since it has been proved that when an ectopic fœtus continues to live, these deformities gradually disappear completely, it is evident that the bodily shape of a child depends as much upon external circumstances as upon inherited peculiarities.

ECTOPIC GESTATION : UNRUPTURED TO TERM.

R. FREUND, Halle (Hegar's *Beitraege z. Geb. u. Gyn.*, Bd. xviii., Heft 1), reports the fifth recorded instance of this very rare occurrence. In a primipara, aged 28, a diagnosis of extrauterine gestation in the tenth month was made. On account of adhesions the fœtal sac in the left adnexa could not be completely removed on laparotomy, but the

woman made a good recovery ; the child, 552 cm. long, and 4,150 g. in weight, was slightly macerated in parts. The placenta, doubled over all round its maternal surface, in shape resembled a mushroom hat ; a unique condition, which Freund explains by the insertion of the placenta being directly upon the mesosalpinx. The pedicle of the placenta was therefore formed by a portion of the tube wall peculiarly well supplied with blood vessels ; a condition under which a powerfully-built woman might go to term. In connection with this case, Freund narrated one hardly less interesting of a woman who for fourteen years had carried a lithokelyphopædion, and was so debilitated that she succumbed after operation. After discussing similar cases recorded elsewhere, Freund concludes that the earlier the mummification and calcifying of the entire ovum takes place, the richer is the ectopic sac in connective tissue, and the adhesions in blood vessels.

ECTOPIC PREGNANCY OF LONG DURATION.

EVANS (*Amer. Med.*, 1903, April 11), reports the above in a woman of 70. Her family history was good. Menstruation began at about 14 years. At 16 a "cold" during a menstrual period brought on dysmenorrhœa, from which she afterwards suffered, but her periods were regular. Married at 23, she first became pregnant thirteen years afterwards. The usual signs were present, quickening occurred about the fifth month, and except for the continuation of the monthly periods, gestation was considered normal. Labour began about the expected time, and continued about thirty-six hours, and was then completely arrested. About a week later, vigorous foetal movements were noted, but suddenly disappeared and never returned. The abdominal enlargement persisted for twelve or fifteen years, then diminished, but never disappeared entirely. Upon her death, almost thirty-three years after the futile labour, Evans removed a lithopædion, which occupied the right unruptured tube, and lay in the right iliac fossa.

It was of bony hardness, but without structure on section, a heterogeneous mass, one portion, next the uterus, representing the head, the remainder the trunk, but no

vestige of the limbs remaining. The whole measured 7 by 4 by 3 in., and weighed four pounds.

ECTOPIC PREGNANCY WITH INTRAUTERINE.

REIFFERSCHIED, Bonn (*Centralb. f. Gyn.*, 1903, No. 12), reports a case of simultaneous intra- and extrauterine pregnancy in a secundipara of 26, who in the third month of her second pregnancy was attacked with violent pain and fainting fits. Laparotomy, undertaken on the supposition of ectopic gestation, disclosed tubal abortion on the left side and a pregnancy in the third month in the uterus. The left tube and ovary were removed and the intrauterine pregnancy went to normal term.

VASTEN (*Wiener kl. Wchns.*, 1902, October 2) reported two instances of coincident extra- and intrauterine gestation in middle-aged multiparæ; both were operated upon, one aborted, but the other bore a male child, weighing 3,550 grammes, at term (*cf.* Vilsin, *ante*, xviii., p. 27).

DOUBLE TUBAL PREGNANCY.

ROSENSTEIN exhibited, at the Berlin Medical Society on March 4, 1903, a woman of 38, who had miscarried ten years previously; four days after menstruation she had profuse hæmorrhage with violent abdominal pains, and in spite of opiates these pains, at first confined to the right side, extended to the left, and she became collapsed. There was a rather large tumour in the right adnexal region and also some resistance on the left side. In doubt as to the symptoms being due to appendicitis, inflammation of the adnexa, peritonitis with perforation, or peritoneal hæmorrhage, he performed cœliotomy, and found a large quantity of blood in the abdominal cavity. He resected the left tube, which was swollen and ruptured, and on the right side extirpated a hæmatoma as large as his fist, the upper limit of which was formed by the right tube. Rosenstein considered the case as indubitably one of double tubal pregnancy, and as unique, but a case was reported by Frederic (*ante*, vol. xviii., p. 153), in a multipara of the same age.

ECTOPIC GESTATION: TWIN TUBAL PREGNANCY.

FERRONI, Milan (*Centralb. f. Gyn.*, 1903, No. 9), relates an interesting case of a septipara of 32 who underwent

abdominal section on account of a tumour in Douglas' pouch. The tumour proved to be a hæmatosalpinx of the left tube and she recovered. The tumour exhibited two swellings; the larger was the more internal and was dark red, the other smaller swelling was much lighter in colour. Both of these sac-formed enlargements of the tube had contained an ovum, that is to say, there had been two pregnancies in the tube at the same time. The aborted ova were in different stages of development; it was, in fact, a case of twin tubal pregnancy with independent sacs of different age. He supposes that the second ovum reached the tube by migration from the ovary on the other side.

OVARIAN CHANGES IN OSTEOMALACIA.

PESTALOZZA exhibited recently to the Tuscan Obstetrical and Gynæcological Society (*Bull. d. Soc.*, 1903, January 4), the uterus and ovaries of an osteomalacic patient, removed by Cæsarean hysterectomy twelve days previously, and drew particular attention to the deficient development of the ovaries, the dimensions of which, after allowing for the contraction due to the preservative they had been kept in, did not exceed half the normal size. Yet the woman had been fertile, and the efficiency of the ovarian function was indubitably proved by the regularity of her catamenia and by her four pregnancies. The hypoplasia of the ovaries acquired still more importance upon investigating the condition of the corpus luteum, which though indeed present, was not at all as large as is usual in a pregnant woman, but was small and discoloured like one unconnected with gestation. Now certain authors, notably His and Clarke, hold that the function of the corpus luteum is to maintain conditions favourable for the nutrition of the ovarian cortex by the active circulation they offer at their periphery, a circulation which in the specimen is impeded by the cicatrization at the seat of the burst follicle. Now if it is a fact that the vigorous development of the corpus luteum is a preventive against the gradual atrophy of the organ which with successive ovulations would ultimately be destructive, one is justified in supposing that in this woman the deficient development of the corpus luteum was a factor in the evident atrophy of the ovary. Such

a theory has the more significance as the woman was osteomalacic. Osteomalacia is now most widely accepted as a trophoneurosis due to excessive morbid activity of the ovaries, and it is therefore important to make known every alteration of those organs, however slight, which may be met with in that disease.

FEVER DURING PREGNANCY.

PINARD, Paris (*Ann. Gyn. Obst.*, Mars, 1903), referring to a work by John Burns, of Glasgow, published in 1809, and to the two forms of fever of pregnancy therein described, points out that, even down to the present day, cases of fever proper to pregnancy are described, and the reality of such a form of fever maintained. Nevertheless he asserts that no such fever exists, though he has seen many cases at the Clinique Baudeloque in which febrile symptoms in a pregnant woman could not be accounted for until laparotomy had been performed, and quotes one such in which, after the removal of an ovarian abscess, all febrile symptoms completely disappeared.

P. Z. H.

ACETONURIA AND PREGNANCY.

AUDEBERT and BARRAJA (*Ann. Gyn. Obst.*, Mars, 1903) have carefully investigated twenty-four cases, from which they draw the following conclusions: (1) They agree with previous authors that acetonuria does not accompany normal pregnancy. (2) Nor does it seem to accompany even pathological pregnancy, though this is a disputed point. (3) Acetonuria, lasting from twenty four to forty-eight hours, is frequently produced during labour. (4) The retention of a dead foetus in the uterus causes acetonuria in the great majority of cases, but not invariably. (5) The presence of acetonuria appears to be due to various causes, such as the process of labour, intoxication by a dead foetus or, according to Mercier and Menu, to eclampsia; it is so certainly under physiological, and sometimes even under morbid, conditions. The complexity of the factors in its production prevents us from grasping the bond which unites them. Acetonuria may perhaps be a biological phenomenon not yet to be explained.

P. Z. H.

CHOREA GRAVIDARUM.

HIRSCHL, Prague (*Monatss. f. Geb. u. Gyn.*, Bd. xvii., S. 56), reports: A powerful young woman, aged 20, sought advice for convulsive movements, impeded nutrition, and sleeplessness. She was in the eighth month of pregnancy, and four weeks previously contractions began in her left hand, and after two mental shocks the choreic movements extended to her entire body. She became so agitated and occasionally distraught, that she was sent to the insane wards; but after eighteen days' treatment (arsenic) improved so much that she was transferred to the lying-in side of the klinik. Pains came on spontaneously and prematurely, and a small living child was born after half an hour's travail, during which she had most severe rigors. The convulsions ceased almost entirely upon the expulsion of the child. She had a normal childbed and was discharged well on the ninth day.

In regard to the treatment of chorea during pregnancy, Hirschl adheres to the principle laid down by Knapp, that light cases should be dealt with by drugs and diet, as ordinary cases in the non-pregnant. Severe chorea in a pregnant woman, however, is a strict indication for the induction of abortion or premature labour.

ECLAMPSIA.

PARTRIDGE (*Amer. Journ. Obst.*, 1903, March) reports nineteen cases of eclampsia which occurred in 694 labours. Of the nineteen mothers, 9, or 47·3 per cent., were primiparæ and 10, or 52·7 per cent., were multiparæ; 5 died—a mortality of 26·3 per cent., 4 of the deaths occurring in ante-partum and 1 in post-partum eclampsia. In 11 cases the convulsions ceased upon delivery, in 3 they seemed to increase.

Eclampsia is due to the action of toxins, either produced in excess and not sufficiently destroyed through faulty metabolism, or retained through deficient action of the kidneys, skin and other emunctories. The destruction of toxins is brought about by the spleen and liver, and autopsies on patients dying from eclampsia have shown gross lesions in the liver and spleen, especially in the former. In reference to treatment, Partridge considers chloral and bromides given in large doses per rectum to be the sheet

anchors. Hot packing and saline infusion he approves of, but condemns chloroform given continuously and morphia. He then proceeds to say: "I am convinced, from both theoretical and practical considerations, that in cases of eclampsia, actual or threatened, the uterus should be at once emptied. . . . Back of all the theories of eclampsia which have been mentioned, lies the fact, generally admitted, that the presence of the foetus in utero is the remote cause of the condition. If this be so, the first object of treatment should be to remove the cause."

J. F. J.

BOSSI'S INSTRUMENT FOR THE DILATATION OF THE CERVIX.

Since this instrument was shown by Dr. Macnaughton-Jones at the meeting of the British Gynæcological Society on February 13, 1902, it has attracted much attention from the profession in this country as well as on the continent:—

BALLANTYNE, Edinburgh (*Brit. Med. Journ.*, February 21, 1903), reports upon its use in three cases of albuminuria in pregnancy, two with eclampsia; he had not had any opportunity for prophylactic treatment. If the principle of early completion of labour is to be accepted as the treatment of this condition, he thinks that this can be done more quickly by Bossi's dilator than by any other means, and with safety if the instrument be properly used.

At the North of England Obstetrical and Gynæcological Society on February 20, HELME, Manchester, spoke of the ease and comfort with which the cervix could be dilated, without any laceration, in twenty minutes, as in marked contrast to the inconvenience of manual dilatation. RUMBOLL (Leeds), on grounds of personal experience, confirmed Helme's opinion.

The instrument was exhibited by Professor A. SMITH at the obstetric section of the Royal Academy of Medicine in Ireland, on March 20, and Dr. PUREFOY, Master of the Rotunda, and Dr. CARTON described cases in which they had used it.

ZANGEMEISTER, Leipsic (*Centralb. f. Gyn.*, 1903, No. 4), raises a note of warning in regard to the dangers of any dilator which is worked by a screw, and questions the propriety of forcible dilatation of the cervix to effect rapid

delivery. He sees no real improvement in the various forms of dilators with from two to six branches, whether worked by a screw, by the hand, or, by elastic bands, which have been invented to supersede the older ones of Mauriceau, Osiander, Ellinger, Basch and others: nor has he anything to say in favour of the eight-branched instruments of Kaiser and Frommer, or of Knapp's modification of Bossi's dilator in which the expanding surface is increased by an arrangement like a dilatable napkin ring; he appears to consider Tarnier's three-bladed uterine écarteur to be better designed than any other instrument of this kind. Zangemeister admits that dilatation of the os and cervix is easily effected with Bossi's instrument, but this is too often at the expense of lacerations, sometimes extensive and sometimes, though not always, accompanied by serious hæmorrhage. Leopold himself says that in three of his first twelve cases the cervix was torn to a slight extent, the tears were, however, important enough to require stitching; and in three of his second series (five cases), after dilatation for placenta prævia, he had to turn the child because of the hæmorrhage. These facts do not agree with his statement that in not one of his seventeen cases was there any laceration of the os worth mentioning. Lacerations have been recorded by Kaiser, Rissmann, Wagner and Bischoff, and Zangemeister's experience has, on the whole, been similar to theirs. He has used not only Bossi's original instrument, but also Frommer's, which, while it has the advantage of eight blades instead of four, has the serious drawback that it dilates the vagina as well as, and to an even greater degree than, the cervix, and, as happened in one of his cases, the vagina is easily torn. He ascertained that, in spite of most cautious and deliberate dilatation, there were in every case multiple lacerations of the cervix; in one instance the loss of blood was very great, but in the others the bleeding was not serious and, without palpation, the tears would perhaps have escaped notice. At the *post mortem* on a fatal case of eclampsia he found, in addition to numerous small lacerations, two tears in the cervix extending to the peritoneum, and also a longitudinal tear in the vagina. The surprising facility with which the screw can be turned while the dilatation is gradually but constantly carried out, even after the os

has been stretched to its extreme limit, is rather a serious danger than an advantage. In dilating by any instrument worked by a screw, the measuring of time by the watch is no adequate safeguard. One cervix will not suffer from rapid dilation while another will tear, though two hours are taken in the process. Moreover, all authors have experienced lacerations, and though, with practice, such may occur less frequently, as Bossi and Leopold assure us, Zangemeister holds that, considering the frequency of such accidents, the acquisition of such practice is unjustifiable, and that, at all events, the instrument is not one to be used by obstetricians of limited experience. The danger is not limited to that of hæmorrhage, though that alone, especially outside hospital, may be critical. The liability to septic infection is materially increased by the presence of ragged and torn cervical tissue. Knapp has said that "with incision one *must*, with Bossi's method one *may*, have hæmorrhage," but the liability of a clean cut to infection is much less than that of a contused laceration; moreover one knows what one divides with an incision, but the extent and direction that a tear from over-stretching may take is past finding out. Considering the high percentage of ascertained lacerations, it is remarkable that the use of the screw dilator is recommended by most of those who have written about it; only Rissmann and Bischoff suggest caution and some limitation in its use. The intra-uterine rubber bag under high pressure is a much safer proceeding and reasonably quick in effect; should time press, or there be difficulty in introducing the bag because of the head being low down or otherwise, radiating incisions of the os, or if much of the cervical canal is still left, a long sagittal incision through the anterior cervical wall (Duehrssen's vaginal Cæsarean section), is a much surer and less dangerous proceeding. Dilatation is, in Zangemeister's opinion, quite out of place for placenta prævia.

OSTREIL, Prague (*Centralb. f. Gyn.*, 1903, No. 11), reports four labours successfully conducted, three by the help of Bossi's instrument and one by Frommer's dilator, in three instances on account of eclampsia and once for uterine tetanus. He limits the use of the instrument almost exclusively to eclampsia; for placenta prævia and the induction of premature labour the metreurynter is to be preferred.

MEYER, Copenhagen (*ibid.*), likewise rejects instrumental dilatation in placenta prævia, and for the induction of premature labour. In his experience hæmorrhage from laceration of the cervix need not be feared. It did not occur in a single case of the fifteen in which he employed Bossi's instrument, six times for eclampsia, twice for infection, twice for placenta prævia, twice for heart disease, twice for pyelitis and once for premature separation of the placenta. All the patients recovered except two.

BECK, Prague (*ibid.*), reports two deaths after delivery by Bossi's instrument.

KNAPP, Prague, and PREISS, Kattowitz (*ibid.*), describe their modifications of Bossi's dilator, that of the latter said to be simpler in use, less costly and easier to sterilise than the original.

BLAU (*Wiener kl. Wchns.*, 1903, February 19) reviews the various methods of dilating the cervix, and reports twelve cases in which Bossi's instrument was used for eclampsia, premature separation of the placenta, threatening rupture of the uterus, and tardy labour with fever. In his opinion the instrument is worthy of further trial, and is especially useful in eclampsia with an undilated cervix.

CALMANN, Hamburg (*ibid.*), reports a case of eclampsia and two of placenta prævia in which, after manual dilatation of the cervix, he was able to deliver by version and extraction; one child lived, and all the mothers recovered.

SCHATZ'S METRANOIKTER.

DANIEL, Hamburg (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 49), writes in favour of the instrument exhibited to the Leipsic Obstetrical Society in 1881 by Schatz, as a means of effecting the rapid dilatation of the cervical canal. This instrument, called a metranoikter, consists in principle of a stem 5.5 cm. long and 5 mm. thick, divided longitudinally into two parts. This stem can be introduced into the uterus by a specially designed forceps, which at the same time compresses two knobs on a strong circular spring connected with each part. When the forceps is removed this spring slowly separates the two parts of the stem, so that in from twelve to twenty hours the canal is wide enough to admit one finger. The method is adapted for all cases where

digital palpation of the cavum is necessary for diagnosis, or for removing remnants of old abortion; in infectious processes it is particularly useful, as there is a free exit for discharges. Daniel thinks that the instrument deserves a wider trial than has yet been given it, especially just now, when in desperate obstetric cases the rapid dilatation of the cervix is recommended; even for such use he thinks the instrument might be adapted with some slight modifications.

In 1883 B. S. Schultze described a convenient modification of Schatz's metranokter; the blades were grooved transversely to prevent them slipping, and were set on an angle of 45° to the ends of the spring; the forceps was also improved.

VAGINAL CÆSAREAN SECTION.

DUEHRSEN (*Archiv. f. Gyn.*, Bd. lxxviii., Heft 2) denies that Bossi's method is an advance in the art of obstetrics, and for emptying the uterus rapidly prefers, when the portio has been taken up, deep incisions into the cervix; when the collum is still preserved, metreurysis by Mueller's bag, and afterwards by the hand, or, if the collum will not yield to metreurysis, vaginal Cæsarean section.

VAGINAL CÆSAREAN SECTION FOR ECLAMPSIA.

DUEHRSEN reported to the Berlin Medical Society, March 4, 1903, the following case. A woman came under his care who had had five fits of convulsions within a few hours; blindness had come on, and he determined to empty the uterus. As the vagina would only admit two fingers, he had to make a vagino-perineal incision before he divided the undilated cervix sufficiently to introduce his hand into the uterus and extract a child $9\frac{1}{2}$ lb. in weight. The wound was sutured and healed by first intention without any secondary hæmorrhage. Next day the patient could see; there were no more fits, and no albumen after the fourth day.

The whole operation up to the complete extraction of the child took only eight minutes. The childbed was normal and the child survived. He declares that this operation is designed expressly to deliver a woman in the safest way of even a very large child, though the womb is completely closed.

EHRENDORFER (*ibid.*) reports a successful case of vaginal Cæsarean section performed upon a woman with hyperemesis.

RUEHL, Dillenburg (*Centralb. f. Gyn.*, 1903, No. 101), points out that the operation recently described by Bumm (*ante* vol. xviii., p. 213), under the name of "Hysterotomia vaginalis anterior," was proposed by himself, in 1896, under the name, "anterior vaginal section of the womb," an operation he has performed already five times, and always successfully.

WENNERSTROEM, Gothenburg (*ibid.*), reports a case of retroflexion of the gravid womb in the fifth month of the second pregnancy of a woman, aged 28, giving rise to obstipation, retention of urine, and pains in the sacrum and legs. As every attempt at reposition proved fruitless, he performed Duehrssen's posterior colpotomy and extracted a greatly macerated fœtus with a detached placenta, inserted a drain in the uterus, and plugged the wound. The woman recovered, and two years afterwards had a normal labour.

CÆSAREAN SECTION IN MORTUA: SURVIVAL OF THE CHILD.

WEISSWANGE, Dresden (*Centralb. f. Gyn.*, 1903, No. 110), reports: A primipara, aged 30, died suddenly a fortnight before the expected end of her pregnancy, as the post mortem showed, from rupture of the aorta. Hurriedly summoned in consultation, he performed Cæsarean section, and so delivered a child deeply asphyctic, but capable, after prolonged efforts, of resuscitation. At least nineteen minutes elapsed between the death of the mother and the extraction of the child. Pingler has recorded the delivery of a living child twenty-four minutes, and Jungeblodt one seventeen minutes after the mother's death; but he finds that only in six or seven instances out of 331 Cæsarean sections *in mortua* performed during the last century was the life of the child saved by the operation.

A CASE OF LATERAL SECTION OF THE OS PUBIS AFTER GIGLI'S METHOD (*cf. ante*, vol. xviii., p. 166).

L. MEYER, Copenhagen (*Centralb. f. Gyn.*, 1903, No. 13), reports a successful case of lateral pubiotomy (hebotomy),

in a secundipara aged 24, with a generally contracted, flat rickety pelvis. The operation offered no difficulty; the child, a boy of 3,700 grms., was easily delivered by axis-traction forceps, and mother and child did well. On the seventeenth day there was already notable formation of callus, and on the thirtieth there was no evidence of the operation, and the woman walked freely with a natural gait. Meyer has performed the ordinary operation of symphyseotomy four times, and all the women recovered, but in none was the post-operative course so satisfactory, and in none was he so certain of the *restitutio ad integrum*. The catheter was passed for four days only.

There is, he thinks, only one question to be raised about pubiotomy after Gigli's method. Is it certain that the small end of the bone next the symphysis will after the section receive sufficient nourishment? He believes it will, but thinks the course of the blood-vessels should be investigated.

ON POSTERIOR PARIETAL PRESENTATIONS.

ZANGEMEISTER, Leipsic (*Beitraege z. Geb. u. Gyn.*, Bd. vi., Heft 3) reports: among 2,250 labours at Zweifel's klinik in a year and a half there were ten cases of secondary posterior parietal presentations, of which two took spontaneously the course described by Veit, two were born spontaneously after symphyseotomy, one was delivered by version and extraction and two by cæsarean section, and all these children were born alive; in three cases perforation had to be resorted to, twice on living children. After discussing the ætiology and prognosis of posterior parietal presentation and the mechanical difficulty of the engagement of the head in this presentation compared with anterior parietal presentation, Zangemeister, admitting that the prospect of spontaneous delivery is not so hopeful in secondary posterior parietal as in anterior parietal presentation, deprecates immediate action upon this view. If version is no longer possible and no more serious interference, such as cæsarean section, is indicated, he advises a little delay before perforating, provided that some portion of the head, not too small, enters the pelvis, that pains and heart sounds are satisfactory, that the patient

has not had several severe confinements previously (rupture of the uterus). Symphyseotomy is still possible after considerable delay and of particular value in this difficulty. Version should be adopted if the presentation does not alter and in complicated and doubtful cases. Nothing can be expected from rotating the head by external or combined manipulation. The high forceps seldom succeed and are most perilous to the mother; they should only be used to avoid the perforation of a living child.

COMPLICATIONS OF PREGNANCY AND LABOUR DUE TO ATRESIA AND STENOSIS OF THE VAGINA.

KERMAUNER, Graz (*Monats f. Geb. u. Gyn.*, Bd. xvi., S. 863), reports an instance of conception after kolpoplexis. The operation had been performed for a vesico-vaginal fistula with a defect in the anterior vaginal wall as large as a hand's palm. The urethra admitted a finger. Necessarily intercourse must have been through the vagina. v. Rosthorn performed a Porro operation and secured the stump to the abdominal wall; the child, a nearly fully-developed foetus, lived and the woman did well. The case is noteworthy as the pregnancy was not, as in others recorded, interrupted prematurely. The indications for caesarean section were given chiefly by the greatly contracted pelvis, and also by the importance of preserving the kolpoplexis, and the Porro operation was chosen on account of the obstruction to the discharge of the lochia. He also reports a case in which conception occurred in spite of the presence of a vesico-vaginal fistula. The fistula dated from a first confinement, in childbed which had been followed by gangrene of the vagina, ultimately healing with extensive cicatrization. In the fifth month of the second pregnancy the fistula was closed by operation, the pelvis was not much contracted and labour though protracted was spontaneous, the cicatrices yielding and stretching. The child, almost fully developed, was slightly asphyxiated, but was easily resuscitated. The puerperium was fever-free; a small vesico-vaginal fistula again formed but was closed by Paquelin's cautery later on. There had been a brow presentation with abnormal rotation, and two possible explanations of the mechanism of the labour suggest themselves: (1) the head may have engaged in the occipital

position with the small fontanelle low down, and as it descended a secondary brow presentation may have been brought about by the abnormal resistance of the cicatrices ; or (2) the brow presentation may have been primary before engagement of the head. Such abnormal rotation of brow presentation (exit with the chin towards the coccyx) has as yet been recorded four times only.

TREATMENT OF PLACENTA PRÆVIA.

PALMER (*Amer. Journ. Obst.*, 1903, March) says that the cardinal principle of treatment is the utilisation of means to prevent and to control undue hæmorrhages and septicæmia. Even one attack of hæmorrhage, slight though it may be, in the later months of pregnancy demands the recumbent position and a physical examination of the uterus and its contents. If the hæmorrhage be slight and the presentation of the placenta be determined to be lateral, then rest and hot vaginal douching will be sufficient ; but if labour pains have begun the firm application of an abdominal bandage will further stimulate the contractions and sooner bring about a natural arrest of the hæmorrhage. If the hæmorrhage continues or repeats itself the vaginal tampon should be employed, that is to say, the cervix should be firmly plugged with sterile gauze, introduced between the cervical walls and the presenting part of the fœtus. This plug should be changed every twelve hours till dilatation of the cervix is secured. When this is sufficiently advanced the membranes are to be ruptured, and the head or the hips (if version has been performed) will then control the hæmorrhage and the completion of the labour may be left to Nature. The plugging which stopped the hæmorrhage and brought about dilatation will stimulate contractions. There must be no hurrying in the application of forceps or the performance of podalic version ; for undue haste may cause a rent in the cervix, with rupture of its circular artery and free hæmorrhage. Palmer has little confidence in the use of any rubber dilator. Barnes' method of partial detachment of the placenta he thinks especially indicated for cases of central implantation. When the cervix is dilated and the hand is in the vagina the separation can usually be carried so much to one side that the placenta can be hooked across the dilated os by one

or two fingers, the membranes ruptured, and delivery hastened. With an undilated os, with hæmorrhage uncontrolled by the firm application of the tamponade, with the child at term and living, with the patient not septic and not greatly reduced from loss of blood, it might be best to do a Cæsarean section. This group of conditions will, however, be extremely rare. In all tamponading, douching, turning, &c., the strictest asepsis must be observed.

J. F. J.

RUPTURE OF THE UTERUS DURING LABOUR.

DE LEE (*Amer. Journ. Obst.*, 1903, March) reports three cases in full; and from experience of ten cases discusses the treatment, as to which he says there must be a marked distinction drawn between complete and incomplete rupture, the latter being tears that extend to but not through the peritoneum. In incomplete tears the prognosis is good; in complete ruptures most of the patients die, whatever the treatment. For incomplete rupture he recommends tamponading the rent with gauze. If the hæmorrhage is severe this tamponading will not arrest it, and the abdomen must be opened and the broad ligaments and vessels clamped from above. For complete rupture he gives a choice of six methods of treatment. (1) Delivery of the child from below and expectancy; ice-bag on the abdomen, ergot, opium, *i.e.*, symptomatic treatment. (2) Delivery of the child from below, tamponade of the rent and the uterus; then as in No. 1. (3) Delivery of the child from below, sewing up rent as far as possible, and tamponade of the remainder. (4) Vaginal delivery, followed by extirpation of the uterus from below. (5) Laparotomy; removal of child and placenta; suture of uterus. (6) Laparotomy; removal of child, &c.; partial or complete extirpation of uterus. The first four methods presuppose the possibility of delivering the child from below. This may be impossible and sometimes inadvisable, because of the danger of increasing the tear in the uterus. If the hæmorrhage is uncontrollable from below, or the pelvis highly contracted, laparotomy will be necessary. What to do with the uterus when the child has been removed depends on several conditions. If the case has been treated aseptically the uterus may be closed with sutures or drained from below. If there is any

suspicion of sepsis the whole uterus should be removed, the peritoneum closed, and the subperitoneal space drained per vaginam. Of the four methods of treatment in which the child is delivered from below, that offering the best results is the partial suture and drainage of the peritoneal cavity and the site of the rupture. In septic cases vaginal extirpation of the uterus and drainage may advantageously be tried.

J. F. J.

RUPTURE OF THE UTERUS.

ZWEIFEL, Leipsic (*Hegar's Beitræge z. Geb. u. Gyn.*, Bd. vii., Heft 1), discusses rupture of the uterus on the basis of twenty-seven cases at the Leipsic Klinik, between 1888 and 1902, and two others at Erlangen, the details of these cases forming part of his article. One rupture was caused by the use of Tarnier's balloon in an abortion owing to over-distension, as Zweifel states, by the voluntary assistant physician; he nevertheless would forbid the use of the met-reurynter in the early months of pregnancy. In five of the twenty-nine cases the laceration did not extend through the uterine wall and one died. There were sixteen deaths in all. In estimating the danger of the accident, Zweifel assumes that from one-fifth to one-fourth of the whole end fatally before any treatment is possible. He considers laparotomy, without raising the pelvis, to be the best treatment in all cases, every drop of blood to be removed from the peritoneal cavity, the serosa to be stitched, but not the uterine musculosa; if necessary the blood must be driven into the small pelvis by lifting the patient up, so that it can be sponged out. If the child is in the uterus it should be delivered through the genital canal, otherwise through the abdominal wound. Zweifel formerly strongly advocated drainage, now he does so only when laparotomy is not to be thought of.

H. W. FREUND (*Centralb. f. Gyn.*, 1903, No. 8) dissents from the view expressed by Kuestner (*ante* vol. xviii., p. 213), and holds that when operating after a previous rupture it is not now justifiable to extirpate the uterus if it is possible to preserve it. He cites a case in which after an extensive rupture, which had been sutured, five abortions followed, but finally a premature labour was induced with complete success. The recorded cases show that when rupture has occurred through a cicatrix it has been nearly always in

labour at full term. As regards the indications, the extent of the scar is of less importance than the time that has elapsed since the rupture happened.

FUETH, Leipsic (*Centralb. f. Gyn.*, 1903, No. 9), reports : A woman, aged 24, who in her first labour, two years previously, had been delivered by Cæsarean section, followed by removal of the ovary, on account of a dermoid cyst, underwent laparotomy a second time on account of a complete rupture of the uterus. The rupture was not in the scar of the incision, but in the fundus of the uterus at the left side. He performed a supravaginal amputation, and the woman recovered ; and he supposes that at the time of the first labour a partial laceration of the uterine musculosa left a cicatrix which gave way during the second labour.

RETENTION OF THE FŒTUS AFTER RUPTURE OF THE UTERUS.

GOTH, Klausenburg (*Centralb. f. Gyn.*, 1903, No. 14), reports : A sextipara received during pregnancy a butt from a calf in the gastric region, and three months later was affected with pain and fever, which led to the emptying of the uterus. Goth found a putrefied fœtus of the seventh month and a gaping laceration of the anterior wall of the cervix ; there was nothing to represent the placenta.

HYSTERECTOMY IN PUERPERAL SEPTIC INFECTION.

JEWETT, Brooklyn (*Amer. Gyn.*, February, 1903), referring to the uncertain status of hysterectomy in puerperal sepsis, as exemplified in the discussion at Rome (*ante*, vol. xviii., pp. 174 ff.), the participants in which were chiefly Europeans, points out that, in America, Vineberg, Baldy, Hirst and Montgomery are well known advocates of the operation ; Peterson also was formerly an advocate of the operation, but in the light of later experience thinks it seldom justified. Davis holds that if the genital canal has been thoroughly emptied and disinfected immediately after the infection occurred, and systemic treatment begun, hysterectomy is unnecessary. Hirst has operated in a considerable number of cases, and at times from four days to six weeks, but generally more than a fortnight, after labour ; as a rule he prefers abdominal amputation at the internal os, but has several times exsected the fundus

only or merely the diseased part of one cornu. The indications have been suppurative metritis or a necrotic condition of the myometrium from streptococcic infection. His results have been good, and those of other American operators are included in a tabular statement of 116 operations collected by Jewett, who admits that the value of the list is impaired by the facts that it probably contains a larger proportion of the successes than of the failures in this field of work, and that the reports do not all give the details desirable for the appreciation of the results, and also by the almost total neglect of bacteriological diagnosis. Of the results stated (112), 52 per cent. were successful (59), and though this means little for the prognosis of the operation, the large number of recoveries under most unfavourable conditions is significant; nearly every survival must be counted a life saved by the operation, for, with few exceptions, the prospect, as indicated by the clinical facts and the findings at operation, was manifestly hopeless but for the radical course adopted. Operation was most successful when the infection was limited to the uterus; that is in perforation by the curette or otherwise, total or partial placental retention, septic myomatous uteri, multiple abscesses of the myometrium, pus collections beneath the serosa and necrotic areas in the uterine wall. No material difference appears between the results of the abdominal and of the vaginal operation. Jewett concludes that in puerperal sepsis hysterectomy, though seldom demanded, is, in rare instances, clearly indicated; when other means have been tried faithfully and are apparently powerless to avert death, surgical intervention should be considered; exploratory section may sometimes open the way to save life. Particular attention is drawn to the successful treatment of thrombotic veins by Bumm, Freund, Trendelenburg and Baldy, and to Sippel's papers on the operative treatment of puerperal pyæmia (*ante* vol. xviii., p. 214).

THE INDICATIONS FOR HYSTERECTOMY IN PUERPERAL SEPSIS.

DURET (*J. d. Sc. méd. de Lille*, Avril 4 et 11, 1903), in concluding an article on this subject, divides cases of puerperal infection into three categories: (1) those in which the infection is localised in the pelvic organs, and best

treated by uterine disinfection, curettage, incision, removal of the appendages or by hysterectomy. (2) Cases of acute sepsis without local lesions ; when these are due to placental infection and cannot be satisfactorily dealt with by the curette, hysterectomy will give good results ; when they are due to the excessive virulence of the microbic agent, it is doubtful if hysterectomy will be of use unless some amelioration is first produced by subcutaneous injections of artificial serum. (3) Chronic infections resulting from phlebitis, uterine or peri-uterine lymphangitis, or from undetected foci in the parenchyma or vascular tissue of the uterus ; in these hysterectomy may sometimes be of service, but the result will be the more uncertain the longer the operation has been delayed. Generally Duret holds that in all cases of puerperal infection, whatever their nature, the best treatment consists in disinfection of the uterus, and copious injections of artificial serum repeated at frequent intervals, and he believes that as these injections will improve or support the resistance of the patient to microbic intoxication, they improve the likelihood of a radical operation being successful afterwards.

P. Z. H.

HYSTERECTOMY FOR PUERPERAL SEPSIS.

BAISH, Tuebingen (*Beitraege z. Geb. u. Gyn.*, Bd. vi., Heft 3), says that the complication of pregnancy by complete inversion of the vagina and elongation of the neck of the uterus is often underestimated as an obstacle to labour. The danger lies, on the one hand, in delay in the dilatation of the os owing to rigidity of the cervix, and on the other, in liability to infection owing to the os being outside the body and possibly ulcerated, especially if the patient does not come under observation till labour has begun. He quotes two cases from Doederlein's klinik : in one the woman died because she shrank from the total hysterectomy proposed to her ; in the other, as there was already infection of the cavity of the uterus, though the os had not yet begun to dilate nor the cervix to be taken up, the pregnant uterus was removed by the vagina with good result. Examination of the specimen proved that the foetal membranes were everywhere infested with diplococci and streptococci, as was the placenta also on its uterine side, especially near its edges. In sections of the endo-

metrium, from the inner os up to the fundus, diplococci were found in the superficial layers of the mucosa in nearly every one; the deeper layers, veins and lymphatics, were free from cocci.

Baish reports three other cases of total extirpation of the septic uterus, with one death. At Doederlein's klinik, they have found that surgical intervention is more particularly indicated in cases of mixed infection, and also in cases of prolapse, if during or after labour fever appears, and in cases of retention of ovular remnants, if after the removal of such the fever does not promptly diminish, or if the complete removal is for any reason impossible. Indications may also be given by putrefying tumours of the uterus and such like causes, a complete enumeration of which is impossible.

Even if the germs have found their way into the circulation beyond the uterus, that is not to be accepted as an absolute contra-indication to operative measures. The removal of an infected endometrium by the curette should not be attempted.

THE STRUCTURE AND HISTOGENESIS OF PLACENTAL TUMOURS.

DIENST, Breslau (*Zcits. f. Geb. u. Gyn.*, Bd. xlviii., Heft 2), describes two carefully recorded cases of tumours of the placenta: (1) a solitary growth in a septendecipara, aged 44, with pronounced and general arterio-sclerosis; and (2) four independent growths in a secundipara aged 25, with uncompensated mitral insufficiency; the microscopical structure of these four tumours and of the solitary growth being identical. Both patients suffered from stagnation in the blood circulation markedly increased towards the end of pregnancy, and in both instances, accordingly, the liquor amnii was unusually large in amount, and the children were born with symptoms of congestion to be attributed to the disturbance in the maternal circulation. These cases, with 43 similar ones previously published, make 45 recorded instances of tumours of the placenta.

The tumours consisted of an investing layer of syncytium or Langhans' cells covering a layer of connective tissue, which towards the centre of the tumours passed gradually into mucous tissue, and by its arrangement divided them into a number of sub-sections, the proper parenchyma of the tumours lying between partitions of the

connective tissue. As appears from a comparison of these cases with the others recorded, the tumours are generally situated near the foetal surface of the placenta, and are in causal connection with the chorion and its blood-vessels. The stroma of the tumour corresponds to proliferation of the chorionic connective tissue, while the mucous tissue and parenchyma proper are derived from the allantois. No transition from villi into the tissue of the tumour could be traced anywhere; any appearance of the kind proved, on more exact examination, to be due simply to contiguity and subsequent secondary attachment of tumour and villi.

Tumours of the placenta are in fact to be reckoned as new growths, and not as chronic hypertrophy; they have all the characteristics of tumour proper, and must be accounted such in the strictest sense; that they have been given different names by different authors is, in Dienst's opinion, a mistake, for the growths in his own and the other published cases exhibit in essential points identically the same anatomical structure; all therefore should be called by the same name, and, as they are derived from the connective tissue, he suggests for them the term chorioma to distinguish them from the chorio-epithelioma.

The beginning of the development of such tumours in the interior of the placenta may be set at a time directly after the first appearance of vessels in the chorionic villi, that is to say, about the middle or end of the third week of the placental period; ætiologically that development is to be attributed to stagnation in the circulation of the blood. In consequence of degenerative processes, new connective tissue may, in course of time, replace the proper tissue of these growths.

OBSTETRIC PARALYSIS.

THORBURN, Manchester (*Jour. Obst. Gyn. Brit. Emp.*, 1903, May), points out that obstetric paralysis, as described by Duchenne in 1872, is identical with Erb's paralysis in the adult, and involves the fifth and sixth nerves only. In a rarer form described by himself, and by Seeligmueller, the entire plexus is injured, the whole upper limb is flaccid and paralysed and, owing to the filaments passing from the last cervical and first dorsal to the cervical sympathetic, and thence to the iris and muscle of Mueller, there is retraction of the eyeball and myosis on the affected side. All cases of the Erb-Duchenne type may be attributed to

direct traction, the plexus being stretched by deflection of the head. Prognosis should be guarded; Comby, however, says that those after head presentations are more favourable than breech cases. Until recently treatment was confined to warmth, massage, galvanism and the like. Surgical intervention was first attempted in adults; numerous cases of primary suture of the plexus and its roots have been recorded, and secondary operations, resection of callus, &c., have been done with more or less success by Wallis (898), Tuffier, Thorburn, Lesser and Kennedy. Kennedy also reported lately (*Brit. Med. Jour.*, 1903, February 7), three secondary operations for obstetrical paralysis, respectively two months, fourteen years and six months after birth, and suggested two months as a reasonable time to wait. The result in the first cases was excellent; as to the others there has not been sufficient time to judge. The conclusions drawn by Thorburn are that in obstetrical paralysis (1) the cicatrix will be found, in most cases, accessible at the junction of the fifth and sixth roots; (2) unless within two or three months there has been marked improvement, recovery without operation is not to be expected; (3) if such improvement does not occur, the plexus should be exposed; (4) and the permanent cicatrices should be removed and the nerves, if desirable, resected; (5) the results of such operation are likely to be favourable.

SHOEMAKER (*Lucina*, 1903, May, abstract from *Zeits. f. G. u. G.*), concludes from the data of recorded cases, and from his own observations and experiments upon animals, that: (1) In spontaneous travail one should not drag upon the head to hasten the delivery of the shoulders, but leave nature to effect that stage of childbirth without interference, or, at the most, assist her by external pressure. Traction, if unavoidable, must never be lateral. (2) In extraction by the forceps, one should rely upon compression of the uterus as soon as there is any reason to suppose that the shoulders have any difficulty in entering the pelvic brim, attention being given not only to the axis of the pelvis but also to that of the fœtus. (3) In extraction by the foot, one should bear in mind the injuries that one may inflict upon the fœtus, and, for the disengagement of the aftercoming head, rely upon the application of forceps.

NOTES.

By the death of Dr. THEODORE GAILLARD THOMAS, the British Gynæcological Society has lost one of its earliest and most esteemed Honorary Fellows. Born in South Carolina in 1832, he graduated at Charleston, and after some year and a half spent in visiting the European Medical Schools, settled as a gynæcologist in New York, where in 1863 he was appointed Professor of Obstetrics and afterwards of Gynæcology in the College of Physicians and Surgeons. His well-known work on the "Diseases of Women" went through many editions, and was translated into many languages, including Chinese. He had a great reputation as an operator, and was a fluent and most instructive lecturer. He was attached to the Women's Hospital when it was the only institution for the treatment of gynæcological disease in New York. He resigned his professorship some years ago, and at the same time gave up operating, but retained some of his consulting appointments and practice. He died suddenly in his seventy-second year, from heart disease, at his winter home at Thomasville, Georgia, on February 28.

Dr. W. E. B. DAVIS, formerly a Fellow of our Society, we learn with regret, was run over by a passenger train at Birmingham, Alabama, and killed instantly, on February 24, 1903. He was Professor of Gynæcology and Abdominal Surgery in the Birmingham Medical College, and a prominent member of many medical societies; was Hon. President of the Pan-American Congress in 1893, and Vice-President in 1896. He had served as Editor to several medical journals, and himself wrote many valuable contributions on Abdominal Surgery.

Professor ADOLF GESSNER died on February 24, 1903, at the early age of 38. He had been assistant to Frommel

at Erlangen from 1890, and at Olshausen's Klinik from 1893-97, when he qualified as Privatdozent, and was again appointed Assistant and Reader at Erlangen. In 1901 he was made Director of the Frauenklinik and Professor of Obstetrics in the University there. He was the author of the article on "Sarcoma Uteri" in Veit's Handbuch, and an authority on Antisepsis and Asepsis in Midwifery.

Dr. VINCENT GEORGES BOVILLY, Professeur Agrégé of the Faculty of Medicine of Paris, and Surgeon to the Cochin Hospital, died in March last, at the age of 54, after a long and painful illness. His death is a severe loss to French Gynæcology, as he had in preparation a large treatise which he was not spared to publish. His *Thèse d'Agrégation*, on "The Acute and Chronic Tumours of the Cavum Retzii," attracted much attention, and he was responsible for the chapter on "The Surgical Affections of the Uterus" in the *International Encyclopædia of Surgery*, 1888.

Geh. Obermedizinalrat Dr. GUSTAV v. VEIT, who from 1863 to 1893 was Director of the University Frauenklinik and the Representative Gynæcologist at Bonn, died in retirement at Gevelsdorf in Pomerania, on April 20, at the age of 79.

Other recent deaths among Gynæcologists and Obstetricians are those of Dr. EDWARD W. JENKS, formerly Professor at Chicago, and Dr. JOHN W. COLLINS, formerly Professor at Denver Medical College; and on March 11, Professor ENRICO BOTTINI, Professor at the University of Pavia, at the age of 65.

For the Chair of Gynæcology at Jena, vacated by Professor B. S. SCHULTZE, the selected candidates were: Professor AUGUST MARTIN, Greifswald, and Extraordinary Professors KROENIG, Leipsic, and SELLHEIM, Freiburg: Professor KROENIG has been appointed, and the Gynæcological course at Leipsic arranged for the current term will consequently be entrusted to Privatdozent Dr. HEINRICH FUETH, Assistant at the University Frauenklinik.

Professor B. S. SCHULTZE has been given the Freedom of the City of Jena on his retirement. Dr. FELIX SKUTSCH, for many years his Senior Assistant, has resigned his Academic position at Jena, and will practise as a Gynaecologist in Leipsic.

Professor VEIT succeeds the late Professor GESSNER as Director of the Obstetrical Klinik at Erlangen.

Privatdozent Dr. JOHANN BÁRSONY has been appointed Professor of Obstetrics and Gynaecology at the University of Buda Pest, in succession to the late Professor KÉZMÁRSKY.

Privatdozent EMIL KNAUER, formerly First Assistant at Chrobak's Klinik, has been appointed to succeed Professor v. ROSTHORN in the Chair of Obstetrics and Gynaecology at Graz.

Dr. F. WESTERMARK has been appointed Professor of Obstetrics and Gynaecology in the Faculty of Medicine at Stockholm.

The title of Professor has been conferred upon Dr. S. MIKNOW at the Military Academy of Medicine at St. Petersburg; at Lausanne Dr. G. ROSSIER is nominated a Professor of Obstetrics, and Dr. M. MURET a Professor of Gynaecology.

The *venia legendi* has been accorded to Privatdozenten Dr. J. MEYER, Dorpat; Dr. MAX STOLZ, Graz; Dr. R. TEMESVARY, Ofen Pest, and Dr. JOSEPH HALBAN, Vienna.

On the occasion of the fiftieth anniversary of his birth, Dr. OTTO ENGSTROEM, Professor of Gynaecology in the University of Helsingfors, was entertained at a banquet given in his honour by the Medical Profession in Finland, on March 30, 1903.

Dr. EDWARD MALINS, President of the Obstetric Society of London, has resigned his appointment in connection with the Birmingham General Hospital, and Dr. THOMAS WILSON has succeeded him as Honorary Obstetric Physician to that Institution.

A Gynæcological Society for East and West Prussia has recently been organised, of which Professor WINTER is Director at Koenigsberg, and Dr. KOSLIN at Dantzic.

The German Gynæcological Congress will this year meet at Wuerzburg on June 3—6. Professors VEIT and WERTH report on "The Anatomy and Treatment of Extra-uterine Pregnancy; Professors A. MARTIN and O. KUESTER upon "Operations for Prolapse, especially in regard to their Permanent Results." An invitation to all Gynæcologists to take part appears in the *Centralblatt fuer Gynækologie*, April 25, over the names of :—HOFMEIER, First President; OLSHAUSEN, Second President; SCHATZ, Treasurer; FRITSCH; F. MUELLER; PFANNENSTIEL, First Secretary, and G. BURCKHARD, Wuerzburg, Second Secretary.

Dr. LEITH NAPIER has resigned his appointment of surgeon and gynæcologist at the Adelaide Hospital, medical officer to the Adelaide Gaol, and medical officer to the Adelaide Lunatic Asylum, and commenced general practice at North Terrace.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
AUGUST, 1903.

GASTRIC TROUBLES AS RESULTING FROM INFLAMMATION
OF THE FEMALE GENITAL ORGANS.

LIOPET (*Thesis*, Lyons, 1901; *Zentralb. f. Gyn.*, 1903, No. 26) declares that statistics show more than ninety per cent. of those women who have hypogastric trouble suffer from gastric disturbance also. The cause of the latter may be either reflex or mechanical; in the former case, nervous gastric disorders are set up by the genital affection; in the latter, adhesions formed between the great omentum and the peritoneum of the inflamed organs in the small pelvis exert a drag upon the greater curvature of the stomach, which causes not only the descent of that organ, but also a kinking of the duodenum. In reflex cases, treatment should be directed to improving the general health; in the others, the adhesions should be separated after laparotomy. Drainage would of course be contra-indicated.

ACTINOMYCOSIS OF THE GENITAL ORGANS.

HENRIOT (*Thesis*, Lyons, 1902; *Zentralb. f. Gyn.*, 1903, No. 26) points out that while actinomycosis of the external genitals is comparatively harmless, in the internal organs it is very dangerous; of ten cases collected by him, eight died, and two were discharged uncured. Actinomycosis may develop in the parametrium, ovaries or tubes; the only treatment is the earliest possible operation.

HOT AIR TREATMENT OF GYNÆCOLOGICAL AFFECTIONS.

BUERGER, Vienna (*Wiener kl. Wchns.*, 1903, No. 28), finds that this treatment, which can be carried out by electrically heated sweating chambers, or by apparatus for the supply of hot dry air, has very beneficial results on the general system. It causes a rapid and remarkable improvement in the subjective symptoms of the patients,

and a decline of the pain, effects which are to be attributed to the active hyperæmia caused by the heat. In many cases an improvement in the appetite and an increase in the body weight also is noticed. The cases most benefited are those of parametritis, in which a diminution of the inflammatory swelling generally takes place, and in many cases a rapid melting down of tissue infiltrated with pus. Even in perimetritis good effects are sometimes obtained, especially in exudations of the stump. Hot air treatment seems contraindicated in large adnexal inflammatory tumours, if there is fever; in other cases there has been an involution of the inflammatory œdema. Actinomyces in one instance, exhibited improvement, as did also several cases of fistula of the abdominal walls.

RUPTURED URETHRA.

GROVES (*American Medicine*, 1903, March 14) comments upon the operative difficulties of repairing a urethra which has been torn completely in two. The task of finding the vesical end is impeded by the extravasation of blood and urine, but pressure over the bladder will sometimes cause a flow of urine, which solves the problem. In one case he was unable to find the opening until he had made a suprapubic incision, and passed a catheter through the canal from the bladder; the case did well. The torn ends should be accurately approximated and stitched together, as the permanent patency of the canal will depend on the union of the mucous membrane. If the edges of the mucosa are not brought together, cicatricial tissue will be formed, and a stricture develop.

SHORTENING OF THE ROUND LIGAMENTS FOR RETROFLEXION.

MAZADE (*Thesis*, Lyons, 1902; *Zentralb. f. Gyn.*, 1903, No. 26) describes a modification of Alexander's operation applied to the treatment of mobile retroflexion by Professor Villard of Lyons. He makes a curved incision from one inguinal canal to the other, in the hairy part of the pubic region. The two round ligaments are then drawn well forward, tied together, and secured by stitches near to the symphysis, and by other stitches to the external rings of the inguinal canals. It is not necessary for a pessary to be worn during convalescence. Six successful cases within

the last two or three years, with two instances of pregnancy after the operation, are appended in support of the method.

SHORTENING OF THE ROUND LIGAMENTS FOR RETRO-DEVIATION OF THE UTERUS.

WALDSCHMIDT (*Zentralb. f. Gyn.*, 1903, No. 27), in a dissertation based on the 37 cases last operated on in the Hamburg-Eppendorf Hospital by Kocher's method, reports that of a total number of 151 patients on whom the Alexander-Adams' operation was performed by Kuemmell, 91 were subsequently examined and the result was found to be satisfactory in 89, recurrence having taken place in 2 only; 9 patients had been confined without any accident and 3 were pregnant and not suffering in any way. No drainage was employed after the operation nor was any pessary introduced; the patients were kept in bed for twenty days, and discharged at the end of four weeks.

OPERATIONS FOR PROLAPSE, ESPECIALLY IN REGARD TO THEIR PERMANENT RESULTS.

Congress of the German Gynaecological Society, Wuerzburg, June 3 to 6, 1903.

KUESTNER, Breslau (*Zentralblatt fuer Gynaekologie*, 1903, No. 27), reported to this effect:—

1.—*Definition of Prolapse of the Uterus, and its Anatomical Forms.*—The vagina is in various ways involved in prolapse. But prolapse of the vagina and prolapse of the uterus are different things. Prolapse of the vagina is a symptom associated with descent of the uterus, and is then as a rule limited to a prolapse of the anterior vaginal wall; the prolapse of the uterus is the deeper of the two. Prolapse of the posterior vaginal wall may occur in no relation to the uterus, and with or without rectocele, and is generally the consequence of old perineal laceration; in such cases the position of the uterus is often quite normal. In extreme uterine prolapse, the entire vagina becomes inverted. Moreover, cases occur in which the upper part of the vagina shares in a very peculiar way in the prolapse of the uterus, and forms a disproportionately large protrusion; this implies an abnormally deep Douglas's pouch, an anatomical characteristic of infantilism.

2.—*Anatomical Conditions of the Uterus and the Neigh-*

bouring Organs in Prolapse.—The bladder is generally involved, in the form of a larger or smaller cystocele, in consequence of dislocation and deformation. The urethra, of course, is displaced also. Rectocele is more often due to injuries in childbirth and, even in quite large prolapse, may not exist at all. Owing to œdema, there is generally considerable enlargement of the uterus, and elongation and thickening of the cervix, with ulceration of the portio. The pelvic peritoneum is extremely loose and stretched; The anterior and posterior excavations much deepened. The parametric tissue is also much relaxed; the musculosa of the round ligaments is thickened. In 20 per cent. of all cases of prolapse there are active inflammatory processes in the pelvic peritoneum or adnexa.

3.—*Ætiology.*—Prolapse is a consequence of insufficiency in the attachments of the uterus. The pelvic floor is assuredly a firm support for the pelvic organs. When this support is lost, greater demands are made upon the other pelvic supports of the uterus and bladder, and upon their functional powers—demands which, sooner or later, they are unable to satisfy. In the process of relaxation, the elastic and connective tissue of the ligamentary apparatus are the first to give way. Increased strain is then laid upon the unstriated musculosa of the ligamentary apparatus, by which for a time the uterus may perhaps be kept in its proper position as, at first, there is compensation by functional hypertrophy; but as the musculosa cannot permanently maintain the double function of supporting the uterus, and causing its normal movements, insufficiency must ultimately supervene; relaxation then leads to retroflexion, and from that to prolapse.

4.—*Leading Principles in the Treatment of Prolapse of the Uterus.*—Prophylaxis of prolapse of the uterus is identical with prophylaxis of retroversio-flexio, *i.e.*, pessary treatment, ventral fixation, vaginal fixation, and, especially in younger women, Alexander's operation.

In the treatment of the prolapse when it has occurred, the retroflexion must be remedied by operation, and the lumen of the vaginal canal reduced. Ventral fixation and colporrhaphy are particularly valuable, as also fixing the uterus to the posterior pelvic wall. In isolated cases, panhysterectomy.

MARTIN, Griefswald, held prolapse to be a local manifestation of a general infirmity, and that (1) the prophylaxis of prolapse should be attended to much more thoroughly than it has been up to the present, by such measures as the repair of any deficiency in normal closure of the vagina or the pelvic floor, arising from any cause whatever; by systematic care in childbed, in the climacterium, and after all general diseases; and by timely care in the preservation of the normal shape and position of the uterus. Anterior colporrhaphy and, colpoperineorrhaphy also, were measures not to be neglected. (2) The surgical treatment of prolapse offered most prospect of success when the steps of the operation were directed towards the alteration of the individual parts. It was not enough to remove masses of hypertrophied mucous membrane, the uterus and the whole of the pelvic connective tissue should be included in the plan of operation, which would have its proper completion in the restoration of the closure of the vagina. (3) Consideration of the alterations individually would, in the majority of cases, suggest a suitable way of securing the uterus, in choosing which the changed relation of the organ to the parts about it should always be considered (absolute relaxation of the ligamentary apparatus, adhesions, &c., requiring separation, vaginal or ventral fixation, or the Alexander-Adams' operation). In cases of great displacement of the bladder, special attention should be directed to the formation of a new system of support. Whether gathering up of the base of the bladder, vesical fixation, retro-fixation or undersetting of the uterus itself would give the better results, was still to be decided. (4) The removal of the uterus was indicated when it was so diseased that it would have to be removed if it were in a normal position; but the methods of operation devised by W. A. Freund, Wertheim, and Fritsch seemed worthy of further trial whenever the organ was in a condition to be used as a means of support. (5) When the uterus, vagina, and other pelvic organs had come to be permanently outside the body, the extirpation of the mass might be justified as a last resource.

MARTIN added the following remarks: No doubt the position of the uterus plays an important rôle in the origin of prolapse; but neither it, nor lacerations in childbirth,

nor infantilism, can be considered the one important factor. Little information was to be gained as to the aetiology of prolapse from cases in unmarried women, for the patients were seldom intact. He laid much stress on the importance of a woman's general condition, of physiological involution in childbed, and in the climacterium, and of the disturbed nutrition in severe diseases—conditions in all which there was destruction of connective tissue, and in which prophylaxis should be employed. With the improvement of the general condition, the local affection would improve also, and with the exercise of prophylactic care, extreme cases would become extremely rare. Prophylaxis did not consist in the use of pessaries, but rather in general care, the early operative treatment of vaginal prolapse, and the correction of any displacement of the uterus. The importance of the bladder in the development of prolapse was indubitable, but the most suitable method of dealing with cystocele was not yet established, and even the manner in which the uterus should be approached was still an unsettled question. Extirpation of the uterus and vagina was certainly indicated in many cases, and he had performed it successfully in nineteen cases among 2,000. KUESTNER dissented from Martin's views, attaching great importance to retroversion and little to prolapse of the vagina. Pessaries he thought very valuable, and a means by which much prolapse might be avoided. He approved of total extirpation when other methods failed.

The following communications also were made to the Congress :—

HALBAN, Vienna, in regard to the anatomy and ætiology of the displacement, drew distinctions between uterine prolapse, vaginal prolapse, and hypertrophic elongation, the difference being in the condition of the musculature of the pelvic floor. In cases of elongation he found the genital fissure much expanded, but the configuration otherwise normal, and the uterus at its normal height. On the other hand, in prolapse of the uterus the entire pelvic floor was much depressed, the levator ani muscles thrust far apart, and, like the whole of the pelvic floor, much atrophied. That the elongation was in most cases

confined to the lower segment of the uterus was shown by the position of the inner os.

ZIEGENSPECK, Muenchen, advanced the theory that prolapse was due to the difference between the intra-abdominal and the atmospheric pressure. It was an important circumstance, in connection therewith, that the aperture in the pelvic floor for the passage of the vagina was from 6 to 7 cm. in front of the spinal line, the normal situation of the portio vaginalis. The uterus lay over this oblique aperture, just like a bolt across the slit in a door, acted upon by intra-abdominal pressure from above and by the atmosphere from below. The conditions for the occurrence of prolapse were present when the portio vaginalis found its way into the aperture in the pelvic floor, and in consequence of the difference of the internal and external pressure, was forced outside.

SCHATZ, Rostock, thought it dangerous when women exerted voluntary pressure in labour before the vagina had risen up above the child's head, and that the vagina was then liable to be torn from its pelvic attachments. Lacerations of the vagina in labour were also factors of importance. Such tears, generally lateral, were very disastrous when the posterior wall gave way, as the transverse tension of the pelvic floor was then destroyed. In extraction by forceps, the levator ani was frequently crushed, as might afterwards be recognised by the want of symmetry in its insertion.

KOBLANCK, Berlin, in regard to the permanent results of operation, suggested the classification of the cases as cured completely, relatively, or not at all. Of 511 cases of prolapse, he found, after observation for four years, that 44 per cent. were cured, 34 per cent. were partially so, and 22 per cent. had recurrence of the displacement. Recurrence after childbirth was generally attributable to unnecessary operative interference during labour. In 388 of his cases of prolapse, the uterus was retroverted or retroflected, and in twenty it was atrophied.

SCHAUTA, Vienna, for severe cases of prolapse of the uterus and vagina recommended the following method of operation. After longitudinal incision of the anterior vaginal wall, the vaginal wall is undermined and the bladder

pushed upwards; the uterus is brought forward out of the peritoneal cavity and healed into the vesico-vaginal septum, and the vagina is entirely closed behind the uterus. He claimed as advantages of this method the extreme anterior position of the uterus, the prevention of cystocele, and the complete closure of the vagina. Of course, normal pregnancy could not occur after this operation, nor did it exclude recurrence of the prolapse. DOEDERLEIN exhibited a patient who had undergone this treatment.

BUMM, Hallé, considered that if there was no recurrence of a prolapse within a year of operation, one might already speak of the permanent result as satisfactory. He had seen failures due to insufficiency of the pelvic floor, others to dislocation of the uterus. For the former he recommended Hegar's method; for the latter fixation was indispensable. Vaginal fixation was not worth doing; the uterus, it is true, lies in good position, but the patients have constant trouble. He preferred the Alexander-Adams' operation, or ventral fixation by Olshausen's way. The best results were from total extirpation, and it was a pity it could not be done oftener, as it was an absolute cure. It is of course inapplicable in patients who are not near the menopause. He had done it upon 105 women, of whom 93 per cent. were quite able to work, and 75 per cent. were cured objectively. Bumm drew attention to the importance of watching the bladder after operations for prolapse, cystitis, imperilling not only the success of the operation, but even the life of the patient.

MACKENRODT, Berlin, did not think that the ætiology of prolapse—which, in his opinion, depended upon alterations in the pelvic ganglia after injury in labour, although it occasionally occurred without such—had been made any clearer by the discussion. Since the work of Freund and von Rosthorn, nothing new had been made out as to the apparatus by which the uterus was kept in position, a point that required further investigation. His own researches, which, though demonstrated, had not been published *in extenso*, agreed with the results of Halban and Taendler. Contrary to the opinion of Kuestner, he considered that in the origin of prolapse the general constitution had no influence, although occasionally—that is to

say, after injury in labour—prolapse may occur with enteroptosis, hardly ever otherwise. In many cases in which there has been marked enteroptosis without prolapse for a long time after childbirth, in spite of the enteroptosis, prolapse does not occur. He looked upon this displacement as a purely local affection, in the occurrence of which general causes could hardly be esteemed factors. The various forms of descent of the pelvic organs from lateral obliquity with atrophy of a single ligament to complete prolapse, depended upon whether the atrophy of the pelvic connective tissue was universal or partial. He could not agree with Schatz in attributing the atrophy of the pelvic connective tissue to laceration of the levator ani. The cicatrization of pelvic laceration was always attended with contraction, and there was no reason that those in the levator ani should behave otherwise.

In the treatment of prolapse palliative measures have their part, especially in the earlier stages and in women in easy circumstances. Peat baths, the avoidance of fatigue, small pessaries worn temporarily, not infrequently lead to recovery from slight descent, and so to permanent cure. It was irrational to condemn these palliative measures, for strictly speaking, operation itself acts as a palliative, not merely by its plastic effect relieving the prolapse for a time, but by the free incision in the pelvic connective tissue, and the alteration in the circulation which follows, setting up secondary changes which remedy the atrophy and secure a permanent recovery. For this reason he was opposed to all those exaggerated methods of operation which attempted to do more than, by colporrhaphy and mobile fixation of the uterus in its normal position, restore the normal anatomical relations of the parts.

It was certainly important that these conservative prolapse operations should be accurately performed, so that owing to the alterations in the pelvic connective tissue supervening upon the operation mechanical relief of the prolapse should be followed by definite cure.

GEBHARD (*Ibid.*) reported 54 cases of Vaginal Ventrofixation of the Uterus for Prolapse. After pushing the bladder up out of the way, and opening the vesico vaginal pouch of peritoneum, long catgut sutures were passed through the insertions of the round ligaments into the

uterus at either side. The patient being in the Trendelenburg position these sutures were passed with a needle through the anterior abdominal wall and tied and the uterus thus fixed against the anterior abdominal wall; the vaginal wound was then closed. The operation took about twelve minutes and 49 of the 54 patients had no recurrence.

In the discussion HEINRICIUS, Helsingfors, said that he treated prolapse in younger women by plastic vaginal operations and ventrofixations after Czerny's method; in those past the menopause, by total extirpation of the uterus after Doyen, resection of the anterior vaginal wall, and if necessary, colporrhaphy.

AMANN, Munich, drew a distinction between those cases of severe prolapse in which it was desirable to preserve the capability of conception, and those in which the menopause was approaching or already past. In the former, the faulty position of the uterus might be corrected by the Alexander-Adams' operation, which he always combined with inguinal cœliotomy and Bassini's operation; very rarely ventrofixation with the transverse suprapubic incision might be required. The necessary supplementary plastic work might include even resection of Douglas's pouch. In plastic operations on the perinæum the chief point was the accurate reunion of the fibres of the levator ani muscle. In the second category, Amann recommended for the less severe cases implantation of the uterus in the vesico-vaginal septum; in severe sterile prolapse he had obtained very satisfactory results by turning the uterus forward and implanting it in the vagina in the Freund-Fritsch way.

FRAENKEL, Breslau, said that to avoid the ventral hernia that was liable to follow ventrofixation he now no longer attached the uterus to the lower angle of the abdominal wound, but altogether below it. In performing colpo-perineorrhaphy he made a semicircular incision behind the vulvo-vaginal opening, drew the vagina outwards with one finger and undermined its posterior wall by blunt dissection; in this way he obtained the triangle of Hegar, after whose method he carried out the rest of the operation.

SELLHEIM, Freiburg, in support of a remark of Kuestner's, exhibited sections of pelves of adult nulliparæ, in

which, in addition to other malformations, the pouches of Douglas were abnormally deep and the utero-vesical ones extraordinarily so. He insisted on the importance of these conditions in favouring certain forms of prolapse, and that the significance of a deeply situated plica vesico-uterina, owing to the persistence of a condition that normally existed in the course of development, was not sufficiently understood. Congenital backward displacement of the uterus and incomplete formation of the perinæum were also deformities that predisposed to prolapse. As regarded operative treatment, at the Freiburg Klinik it was still held that even the severest forms of genital prolapse were amenable to treatment by sufficiently extended plastic operations. No attempt to correct a backward displacement of the uterus was combined with the plastic operation unless there was reason to refer some trouble to the backward displacement. In such cases, which were comparatively rare, they had preferred, when the uterus was mobile, to do an Alexander-Adams' operation as being the least serious operation. Their operations for prolapse had given them 79·4 per cent. cures. The recurrences, of which only 3·4 per cent. were bad ones, were to be attributed partly to subsequent labours, but principally to the fact that, in younger women, in view of the possibility of future pregnancy, they purposely abstained from making very extensive denudations.

PFANNENSTIEL. Giessen, shared Schauta's view that the principal danger lay in the cystocele. In ventrofixation the uterus tended to hang perpendicularly and the portio to come behind the symphysis, and so the bladder was given more and more opportunity to prolapse; it was just the same with the Alexander-Adams' operation. The following was in his opinion the best method: an oval incision is made in the anterior vaginal wall and the edges are undermined on each side; the bladder is made completely free, especial care being taken to split the lateral pillars of connective tissue; the uterus is canted forwards. It was to be remembered that the length of the vagina does not always correspond to that of the uterus, but was sometimes less. Complete hæmostasis must be secured before the vagina was stitched up and a high perinæum

must be made. He recommended this operation even for women in the childbearing age. The upper fixation sutures should be as high as the round ligaments.

DOEDERLEIN, Tuebingen, said that prolapse was complete or incomplete ; complete prolapse was generally found in the younger women and might be treated by plastic operations. Complete prolapse usually affected those who were past conception ; of his own cases 75 per cent. were over 40 years old ; such women one might cure, and at the same time sterilise, by total extirpation. Total extirpation was also indicated by any hypertrophic or ulcerative process. He had performed it 63 times with 3 deaths and otherwise very satisfactory results, but it was better to take away the vagina also. Total prolapse demanded total extirpation.

FRITSCH, Bonn, said that prolapse was entirely a local evil, he had found it affect strong women rather than delicate ones. When the uterus was excessively large it should be extirpated, otherwise he recommended Frank's method of strengthening the perinæum. By fixing the turned over uterus to the posterior vaginal wall, cystitis was avoided as micturition was unimpeded, and the rectocele was cured at the same time. Ventrofixation was good but unnecessary ; vaginal fixation should be abandoned as pain and trouble in making water remained. Pfannenstiel's method was a good one if it was desired to suspend the uterus. An ulcerated portio should be amputated. Pessaries were most useful in preventing prolapse, especially in childbed, and as a prophylactic measure, cervical lacerations should be dealt with by Emmet's operation. He always disinfected the uterus before an operation for prolapse with corrosive sublimate solution.

CHROBAK, Vienna, opposed amputation of the portio unless it was altered, thickened and very much elongated. He agreed that thin people were very subject to prolapse, but owing to loss of flesh rather than mere slenderness. The total number of his operations for prolapse had been 1,100 ; 470 had been by the Hegar-Simon method and of 314 of these he had subsequent information. In 84 the results were good ; 68 conceived and in one half of these the condition after labour was ascertained to be satisfactory.

The object in operating should in his opinion be to leave the parts fit to perform their function, that is to say in a condition favourable for copulation, conception and gestation, and therefore the methods he recommended were ventrofixation and the vaginal shortening of the round ligaments. Total extirpation was not justifiable during childbearing age; vaginal fixation was not to be recommended; no absolutely satisfactory method had as yet been devised.

FREUND, Strasburg, said that infantilism, though rare, was certainly an ætiological factor in prolapse, the cause lying in the deficient room in the abdominal cavity. There was after labour always a sinking of all the organs and thus prolapse was liable to occur at that time. The results of surgical treatment had improved since the operations had become more thorough. The condition of the bladder was of special importance, and the advantage of colporrhaphy was that by it the bladder and not the uterus was fixed forwards. He had found ventrofixation very useful and had seen very little trouble after it. Total extirpation was suitable for extreme prolapse but, theoretically, only at or after the menopause and when childbearing and even married relations were excluded.

KUESTNER, in reply, admitted that as yet nothing was ascertained as to the origin and causes of prolapse. All operators practised fixation of the uterus but all recommended supplementary vaginal operations. The results obtained by all were about the same; even total extirpation did not give any better ones. He once more recommended anterior fixation of the uterus and resection of the vagina.

THE ÆTIOLOGY OF INVERSION OF THE UTERUS.

SCHAUTA, Vienna (*Wiener kl. Wchns.*), 1903, No. 28. has long held that inversion is brought about by the same and no other factors, whether it happens independently of childbed or during that period, and especially that contractions do not play any part in causing it. In this article he defends this view and criticises the various objections that have been brought against it by Treub, Thorn and others. In Schauta's opinion every step in the process of inversion presupposes a relaxed condition of the uterus.

and the absence of contraction of any kind. The factors to be considered are temporary or permanent paralysis, atrophy, degeneration and thinning of the uterine wall; which last may be due to myomatous growth. The invagination is then brought about by pressure or traction; the former due to the gradual or sudden action of abdominal pressure, the latter by some such cause as a myoma. An absolute condition for the occurrence of inversion is that the cervix should be passable; in the preliminary preparation of the cervix, contractions of the uterus, may, or may not, play a part.

PUERPERAL INVERSION OF THE UTERUS CURED
BY KUESTNER'S OPERATION.

DIENST, Breslau (*Zentralb. f. Gyn.*), 1903, No. 28, reports that in the case of a woman, aged 31, who came under his care seven months after labour with persistent puerperal inversion, as reposition could not be effected without operation, he opened the pouch of Douglas, and divided the posterior wall of the uterus in Kuestner's way, and was then able to reduce the inversion without difficulty; the woman was well in a fortnight. In cases for which Kuestner's operation is not sufficient, he recommends prolonging the incision upwards and downwards so as to divide both the fundus and the portio in the way recently advised by Westermarck and Borelius.

ON DRAINAGE OF THE UTERINE CAVITY IN GYNÆCOLOGY
AND OBSTETRICS.

REYMOND (*Thesis*, Lyons, 1902; *Zentralb. f. Gyn.*, 1903, No. 26) describes an instrument invented by Dr. Planchu of Lyons, for the drainage and irrigation of the uterine cavity. It consists of an indiarubber tube bent into the shape of a loop, with a long proximal and a short distal end. In the loop itself there are numerous openings, with a single large opening at the point where it passes into the distal part. The irrigation of the uterus with this instrument is very simple; the loop is introduced through the inner os, compressed between the blades of a pair of forceps, and when released in the cavity regains its former shape by its elasticity.

PERFORATIONS OF THE RECTUM DUE TO ABDOMINAL HYSTERECTOMY.

CHAPUT, at the Société de Chirurgie (*Semaine Médicale*, 1903, No. 25), reported that in two cases of abdominal hysterectomy this year, he had to face perforations of the rectum which it was not possible to deal with by simple suture, or by resection of the gut. By suturing the vesical peritoneum to the rectum above the perforation and to the posterior wall of the pelvis, so as to shut off the upper part of the pelvis, and leave the vagina freely open for the discharges, he had been able to treat these cases successfully; in each case the opening into the rectum contracted gradually, and finally closed.

DELBET mentioned that he had often adopted the same procedure when, after an abdominal hysterectomy, a large surface was left at the level of Douglas's pouch, which seemed dangerous as a focus of infection. POZZI said that the tendency of rectal perforations to close spontaneously, especially when not associated with suppurating lesions, was well known. When in the course of a pelvic operation he had to deal with a laceration of the rectum, he had invariably endeavoured to stitch it, for there was little difficulty in obtaining reunion, either primary, if the bowel was healthy, or otherwise, after a case of fistula. RICARD and QUENU, while approving of Chaput's procedure, considered it as merely an instance of the classical method of peritonisation of denuded surfaces, now generally adopted.

PANHYSTERECTOMY COMPARED WITH SUPRAVAGINAL AMPUTATION.

BERTRAND (*Thesis*, Lyons, 1901; *Zentralb. f. Gyn.*, 1903, No. 26) insists on the advantages of the intraperitoneal treatment of the stump in supravaginal amputation of the uterus, still more on those of the retroperitoneal treatment; but as an ideal operation recommends total extirpation as affording the greatest security against infection and hæmorrhage from the pedicle and the possibility of subsequent malignant new growths in the stump.

CHANGES IN THE APPENDIX VERMIFORMIS IN GYNÆCOLOGICAL DISEASES.

HERMES, Berlin (*D. Zeits. f. Chir.*, 1903, Bd. lxxviii., Heft 3), in seventy-five laparotomies for gynæcological

disease, thoroughly examined the appendix for morbid changes, and when desirable removed it. He found such lesions in forty cases, consisting either in abnormal contents and chronic inflammation of the mucosa, or in adhesions frequently leading to secondary inflammation. The lesions of the appendix and genital organs can of course exist independently of each other, but usually they were connected, inasmuch as a primary inflammation in the genitals had extended to the appendix. The cases show that in every laparotomy for gynæcological reasons the appendix should be examined with a view to its removal if diseased.

ON CLOSING ABDOMINAL WOUNDS AND HERNIAL APERTURES BY BURIED METALLIC PLATES.

INARDI, Turin (*Brün's Beitræge*, Bd. xxxvii., Heft 3), in operating for hernia, uses metal plates with a raised and thickened smooth and blunt edge, which he inserts directly upon the peritoneum, or after resection of the hernial sac upon the peritoneal stump. They cause no inconvenience and have proved satisfactory in more than fifty cases, even in two that subsequently became pregnant. He considers that they offer firmer support and are less likely to cause pain from tension than mattress wire sutures. For some years he has invariably used metal for all buried sutures.

VIOFORM, REPLACING IODOFORM.

V. SCHMIEDEN (*D. Zeitschr. f. Chirurgie*, Bd. lxi., Heft 5-6, quoted in *Merck's Reports*, 1902), says that this new substitute for iodoform (chemically iodochloroxyquinoline) is destined to become "the wound antiseptic" of practical surgeons, since it satisfies all requirements that can reasonably be formulated. It has anti-bacterial and, in particular, anti-tuberculous properties, is almost innocuous, odourless and non-irritant, and is very enduring in its action, so that vioform gauze plugs may be left in wound cavities for a fortnight; in fact vioform possesses all the good qualities, without the drawbacks, of iodoform. (*Vide* also Krecke, *Münchener med. Wchns.*, 1901, No. 33).

Its price last year was somewhere between sulphate of quinine and apomorphia, but it will no doubt soon be less expensive.

POST-OPERATIVE ILEUS RELIEVED BY STRYCHNINE.

GRUBE, Hamburg (*Zentralb. f. Gyn.*, 1903, No. 17), again recommends strychnine as a remedy in post-operative ileus, and reports: In a woman of 24 he extirpated a suppurating tubal sac (gonorrhœal) after vaginal cœliotomy and then fixed the retroflected uterus in the vagina. Severe symptoms of ileus appeared on the fifth day. Temperature 38·6°, pulse 140-160, respiration 40; extreme meteorism and malodorous vomit. Castor oil was rejected, clysters ineffectual. He therefore gave, divided in three hypodermic injections at intervals of two hours, the maximum dose of strychnine (0·01 gramme). Peristalsis and flatus soon after the last injection was shortly followed by two copious crumbly stools. A peritoneal abscess subsequently discharged through the vaginal incision, but the woman recovered in six weeks, which was satisfactory in a case of purulent encysted peritonitis with extreme intestinal paresis.

AN ADENOMATOUS GROWTH OF THE PERITONEUM IN AN ABDOMINAL CICATRIX.

R. MEYER, Berlin (*Zeits. f. Geb. u. Gyn.*, 1903, Bd. xli., Heft 1), describes a specimen taken from a woman of 35, who had undergone laparotomy for adnexal disease, and ventrofixation of the uterus. Two years afterwards a nodule in connection with the fundus uteri had developed in the cicatrix, and was excised with the scar, and this nodule contained cysts and canals which must have been derived from the serosa of the uterus or of the abdominal wall.

THE PATHOLOGICAL SIGNIFICANCE OF ADENOMATOUS GROWTHS OF THE MUCOSA OF THE UTERUS AND TUBES.

R. MEYER, Berlin (*Virchow's Archiv*, Bd. clxxii., Heft 3), points out that adenomatous growths of the mucosa are sometimes found penetrating right into the muscular tissue of the uterus, and moreover, are then invariably accompanied by stroma of the mucous membrane. So also in adults, under inflammatory stimulation of all kinds (not merely gonorrhœa and tuberculosis), one sees deep adenomatous prolongations of the mucosa through all the parts of the tube right into the broad ligament. These he considers

to be of post-fœtal formation, and is led to conclude that the mere transgression by a tissue of its physiological limits does not indicate malignancy; infiltration is not on that point equivalent to destructive action.

ON THE CONDITION OF THE UTERINE APPENDAGES IN UTERINE FIBROMATA.

DANIEL (*Rev. Gyn. Chir. Abdl.*, 1903, Nos. 1 and 2); *Ann. Gyn. Obst.*, 1903, June) discusses this question on the basis of 205 observations, of which sixty-nine were collected in a period of ten years in the service of Professor Pozzi. Pathological lesions were found in the appendages or their immediate neighbourhood in seventy-two out of 124 cases of fibroma operated on at the gynæcological clinic of the Broca Hospital (58 per cent.). The anatomical alterations in the Fallopian tubes were of various kinds, hyperplasia, hyperæmia, inflammatory, catarrhal, or cystic salpingitis, &c., and the ovary was almost always implicated. In seventy cases of fibroma complicated with disease of the appendages, the lesions were confined to the ovaries in twenty-eight, to the tubes in twelve, but affected both tubes and ovaries in thirty instances. Daniel classifies the causes of such disease as (1) infection, (2) diathesis, and (3) the direct influence of the neoplasms upon the adnexa. He found about one fourth of the cases to be due to infection; about one half seemed to depend upon a fibromatous diathesis giving rise to non-inflammatory lesions characterised by simple hyperplasia in the tissues of the tube and by hypertrophy with subsequent atrophy and degeneration in the ovary; the remaining fourth were the effect of the mechanical action of the tumours by direct compression impeding the natural drainage of the genital passages, disturbing the circulation, setting up irritative peritonitis, &c. Infection may sometimes precede the fibroma, but more often occurs during or after its development. The result of these complicating adnexal lesions may be to disturb seriously the function of the neighbouring organs, to produce adhesions, and compromise the life of the patient and the success of any surgical interference.

P. Z. H.

CANCER OF THE UTERUS AND OPERATION.

OLSHAUSEN, Berlin (*Zentralbl. f. Gyn.*), 1903, No. 29, said at the Tenth Congress of German Gynæcologists, at Wuerzburg: The principle of operating by the abdomen

went too far, and would in time be modified. He had had 18 per cent. of permanent cases from vaginal operations, and of late years had operated on 50 per cent. of the cases that came before him. In the last two years he had seen 341 cases, and operated upon 210; he chose the vaginal way in 206, and had a mortality of 17 per cent.; of the four cases dealt with by the abdomen one died. Neither complete evacuation of the pelvic connective tissue nor the removal of every gland was possible. There was more reason to operate by the abdominal route to avoid injuring the ureter, when examination showed that that organ was possibly involved in the carcinoma, than with any view of extirpating the glands and connective tissue.

WINTER, Koenigsberg, declared that as soon as the first symptoms of cancer of the uterus appeared, the cases were thoroughly fit for operation, and the profession should offer women treatment which in this stage of the disease would be effective. Their duty, therefore, was not merely to operate upon cancer but to seek it out, so that it might be dealt with at as early a stage as possible. To obtain this object he proposed sending (1) to medical men letters and pamphlets inviting them in suspicious cases to forward test material for microscopic examination, with the view of receiving forthwith concise instructions; (2) to midwives pamphlets, and (3) to the daily press articles containing information suitable for the general public. He was quite aware of the impression that such publications might have upon individuals of hysterical tendencies. His own efforts had already met with partial success, for since the publication of an article at the beginning of the year he had already received sixteen specimens, five of which were carcinomatous.

[The measures proposed by Winter are practically those advocated by Lewers in the *Practitioner*, June, 1902, and endorsed by Professor Japp Sinclair in the address on Obstetrics to the British Medical Association at Manchester.]

ON THE FACTS HITHERTO ASCERTAINED ABOUT THE
HYDATID MOLE AND SO-CALLED DECIDUOMA MALIGNUM.

POLANO, Greifswald (*Samml. kl. Vortr.*, N.F., No. 329), considers that the foetal extodermal origin of Langhan's

layers of cells was definitely settled by Peters' work, "On the Implantation of the Human Ovum," published in 1899. The hydatid mole arises from a proliferation of the foetal ectoderm, accompanied by degeneration of the formation of vacuoles, with which is associated necrosis and oedema of the chorionic villi. Deciduoma is a malignant proliferation of the foetal ectoderm, in which the stroma of the villi takes no part. The epithelial cellular elements of the one individual (the foetus) grow on and into the tissues of another individual (the mother). The fact that in its development this process of malignant degeneration advances in the first instance along the endothelium of the maternal blood vessels, and then gradually encroaches upon the lumina of those channels, constitutes deciduoma malignum as a form of malignant disease as distinctly sui generis as sarcoma or carcinoma. The term deciduoma malignum should be abandoned: it is not so suitable as Marchand's malignant chorion-epithelioma. Polano gives a list of the literature of the hydatid mole and deciduoma malignum since 1895. Earlier publications are given by Marchand (*Zeits. f. Geb. u. Gyn.*, Bd. xxxix., S. 173).

ON CHANGES IN THE OVARIES ASSOCIATED WITH SYNCYTIAL TUMOURS AND HYDATID MOLES, AND ON THE HISTOGENESIS OF LUTEIN CYSTS.

RUNGE, Berlin (*Archiv. f. Gyn.* Bd. lxxix., S. 33), from the examination of the ovaries of eight women, seven with syncytial tumours and one with an hydatid mole, confirms, on the whole, the researches of Marchand, Neumann, Goebel, Fiedler, Poten-Vassmer, Schaller-Pförringer and Stoeckel, who have written on this subject. He finds that the alterations in the ovary begin in the corpora lutea, and summarises his results as follows: The structure of the cyst wall of the corpus luteum, from without inwards, consists of two layers of connective tissue, not always clearly defined the one from the other; then a layer of cells with yellow elements, sometimes called lutein cells, intersected by fine tracts of connective tissue and capillaries. Next to this layer—or, in its absence, next to the preceding one—there may be homogeneous band. The ovaries examined had undergone a cystic degeneration, and in the wall of each cyst there was a layer, not uniform

in form or thickness, of cells which he considers to be lutein cells. Cells of the same character were found distributed in foci in the connective tissue of the various layers of the cyst wall, in some places a few cells only, in others agglomerations of large numbers, the relation of which to the layer of lutein cells was in some places evident, while at others they appeared to be independent. The essential fact to Runge, however, is that the wall of these cystic formations contains a layer of cells with yellow elements. He does not consider these alterations to be due to a malignant degeneration, but rather to an active process in which the lutein cells exhibit a great disposition to proliferate. The association of these cysts derived from the corpora lutea with deciduoma and hydatid moles is well established, but the causal relation that may perhaps exist between these pathological conditions has not yet been discovered.

P. Z. H.

TUMOURS OF THE TYPE OF CHORIONEPITHELIOMA IN MAN.

STEINHAUS, Warsaw (*Wiener med. Wchns.*, 1902, No. 17), describes a tumour of the testicle, the structure of which resembled, almost to identity, that of chorionepithelioma, and which, like another reported by Schlaghauser, must be accepted as an embryoma, containing malignant proliferations of chorionic epithelium. The first case of the kind came before the London Obstetrical Society in 1897, but several others have since been published, and the dictum, "no chorionepithelioma without pregnancy," should rather run, "no chorionepithelioma without an embryo or an embryoma." The presence of chorionepithelioma in embryomata also settles, decisively, the question of the origin of the syncytium, as being derived from the fœtus.

OVARIAN TUMOURS IN CHILDREN.

HUBERT (*Zentralb. f. Gyn.*, 1903, No. 27), in a dissertation at Giessen reported the following case: A girl of 11 years of age suffered from abdominal pain and after about three months her parents discovered a swelling which when examined by a doctor proved to be an ovarian tumour as large as a child's head. Removed immediately by operation it was found to weigh 450 grammes, and to be solid throughout, containing no cysts; the external surface

was rather smooth, but that of a section had a firm fibrous appearance of reddish and yellowish grey colour. The details of the microscopical examination, related very fully, proved it to be a lymphatic adenoma. The author has collected 201 published cases of ovarian tumours in children.

GENITAL TUBERCULOSIS.

TARGETT (*British Medical Journal*, 1903, August 8), in introducing a discussion on this subject at the Swansea Meeting of the British Medical Association, said that in tuberculous subjects *post-mortem* anatomy showed that the genital organs were affected in 7.7 per cent. of all cases, while at the Children's Hospital the proportion was as high as 7.5 per cent. Such disease was not primary, and the infection was either through the blood-stream or peritoneal cavity, or from external sources, but tuberculosis of the external genitals was very rare. The tubes were affected in 90 per cent. of all cases. The form of disease might be miliary, caseous, or suppurative. The diagnosis was difficult, especially when tubercular disease was not evident in other parts of the body. There might be amenorrhœa, but dysmenorrhœa was the rule, and generally there was pain in the pelvis. Caseous tuberculosis should be left alone. Pus he considered implied a mixed infection, and the removal of the disease was often extremely difficult from the rottenness of the organs affected or of the adherent intestines, and was sometimes followed by rapid toxæmia, but laparotomy with vaginal drainage when indicated, was often beneficial. He exhibited with the magic lantern eighteen remarkable specimens of tuberculous tubes and uteri.

PRIMARY CERVICAL TUBERCULOSIS.

KYNOCH (*Ibid.*), in a paper based on a personal observation of primary tuberculosis of the cervix, mentioned that of sixty-nine cases of cervical tuberculosis collected by Beyea, two were certainly and seven probably primary; three other primary cases had been reported in the *Journal of Obstetrics and Gynæcology* within the last eighteen months. Primary tuberculosis was evidently less uncommon than had been supposed.

SPONTANEOUS PERFORATION OF PYOSALPINX INTO THE BLADDER AND ITS TREATMENT.

FAUVERGHE (*Thesis*, Lille, 1902 ; *Zentralb. f. Gyn.*, 1903, No. 26) discusses three methods of treatment : (1) Dilatation of the urethra and of the fistula, with irrigation and drainage of the suppurating sac. This method is not recommended on account of the danger of permanent incontinence of urine, and that of perforation of the sac and infection of the peritoneum. (2) Operation by the vagina. This, it is true, is not dangerous, and has the advantage of affording free discharge to the pus, yet it may not bring the fistula within reach, and a subsequent plastic operation may be required. (3) Laparotomy. This he considers the best method, as by it one is enabled not only to remove the focus of suppuration completely, but also to close the vesical fistula.

SALPINGITIS AND PREGNANCY.

DE VESSIAN (*Thesis*, Toulouse, 1902 ; *Zentralb. f. Gyn.*, 1903, No. 26) writes : When the salpingitis is unilateral, pregnancy is possible, and if the inflammation is declining may have a favourable effect ; but pregnancy in the early stages of salpingitis is very liable to be interrupted. Moreover, the sac may open into the abdominal cavity and cause fatal peritonitis, as has been known to occur. The treatment as a rule should be medical, the instances in which surgical interference can be advised being most exceptional.

ON THE RUPTURE OF TUBAL SACS IN THE COURSE OF ABDOMINAL PALPATION.

LEGUEU (*C. R. Soc. Obst. Gyn. Pæd.*, 1903, May) reports two cases in which, within an hour and a half after rupturing a pyosalpinx accidentally during examination, he performed laparotomy, with complete success. In one case, symptoms of infection, violent pain, vomiting, frequent and small pulse and syncope appeared within ten minutes of the accident ; none such were observed in the other. He detected the accident immediately on each occasion, owing to a slight cracking sound, of which the patient also was aware, and to the sudden disappearance of the tumour the size and boundaries of which he was trying to define.

Considering the impossibility of determining the virulence of the contents of such a ruptured sac, and the futility of any operation once a generalised peritonitis has been allowed to develop, Legueu recommends, in case of such accidental rupture, immediate laparotomy. Generalised peritonitis is sometimes set up by the spontaneous opening of a pyosalpinx into the peritoneal cavity; such spontaneous opening is much more unfavourable than accidental rupture, owing to the obscurity of the origin of the symptoms and the unavoidable delay in deciding upon the treatment. In peri-metro-salpingitis (*sic*) the serous contents of the sac is not so septic as the pus of an abscess, and may be discharged into the abdominal cavity without giving rise to general peritonitis. Legueu had met with such cases, and had also known an abscess to burst spontaneously into the intestine and the patient to recover completely; but he considered such cases as exceptions, and not as guides in practice. Pozzi entirely approved of the course adopted in the cases reported, but insisted upon the necessity of laparotomy even in the serous collections of peri-metro-salpingitis, the contents of which in some cases he had found to be septic, and after rupture to cause serious accidents. He recalled several which had occurred in his own service, and had given much anxiety. He considered it might be laid down as an absolute rule that the rupture of any abdominal tumour, whatever might be its nature, should be taken as an indication for immediate laparotomy. He referred to two instances of the rupture of follicular cysts of the ovary during examination under chloroform, which he thought favoured rupture by paralysing the abdominal muscles, and depriving the tumour of their protection.

P. Z. H.

EXTRAUTERINE PREGNANCY: ITS ANATOMY AND TREATMENT.

Tenth Congress of the German Gynæcological Society, at Wuerzburg, June 3-5, 1903. (Zentralblatt fuer Gynækologie, 1903, No. 28).

J. VEIT, Erlangen, the first reporter, expressed the following views:—

The implantation of the ovum in a mucous membrane outside the uterus is subepithelial, below and not merely

upon it. A true decidua is formed in the uterus in all cases of extra-uterine pregnancy. When the ovum is implanted in the tube the decidual changes in the tubal mucosa are generally slight, frequently only faintly indicated and seldom well marked.

The formation of a reflexa is invariable, it closes the opening through which the ovum penetrated the epithelium ; in the tube the function of the reflexa is partly fulfilled by the tubal folds. Disturbances during development naturally lead to the thinning away or rupture of the reflexa. The formation of the decidua serotina also is imperfect, because the connective tissue at the ectopic seat of the ovum is not so well developed as that of the endometrium. The cells found in the serotina are by some authors considered to be immigrants from the ovum, but Reft and others look upon them as modified maternal cells. Villi, and parts of such, are found in the veins of the serotina.

The anatomical structure of an extrauterine pregnancy is materially influenced by the thinning away of the reflexa or wall of the foetal sac, as well as by its rupture. Very different anatomical appearances are caused by the early death of the embryo, by its maturation, by the remains of a mature but dead foetus, by the retention of remnants of placenta and by the expulsion of the ovum out of the tube. Hæmorrhage in the wall of the fruit-sac may increase the apparent disturbance in that wall.

Primary abdominal pregnancy has not been demonstrated in the human being in whom the seat of ectopic gestation is either in the tube, or in the ovary, and then in a Graafian follicle.

When an ectopic foetus is alive operation is always indicated, and in most cases the extirpation of the sac ; the abdominal route is to be preferred, though in the early stage of pregnancy good results are obtained by the vaginal way.

Operation is also indicated when the embryo is dead in the early period while it is still within the sac ; when it has been ejected, one should wait and not operate unless serious new symptoms supervene. In that case the sac should if possible be extirpated. When the sac has ruptured into the abdominal cavity and the woman's life is endangered, one must interfere at once ; when her general condition is tolerable one may wait.

When, in the later period, the foetus is dead, one should, if the general condition be critical, extirpate the sac. Furthermore, it is not to be denied that when the prognosis is good, one may undertake the extirpation of the sac without any symptoms. In the presence of suppuration of the sac operation is imperative and drainage is then indicated.

In regard to the technic of these operations, an important fact to remember is that every foetal sac has a pedicle, and that the bleeding can be controlled by the ligature of the afferent blood vessels.

WERTH, Kiel, reported: (1) *On the implantation of the Ovum in the Tube*.—The way in which the ovum imbeds itself in the tube is analogous to that of its implantation in the uterus, inasmuch as it passes through the epithelium; but the stratum to which it penetrates is different. While in the uterus the mucosa is thick enough, in consequence of its thinness in the tube, the ovum comes to lie in the musculosa. The implantation of the ovum in the tube as a rule happens at a part of its inner surface free from folds, but the corrugated portion of the tubal mucosa may be the seat of implantation also.

(2) *On the different mode of Sac Formation in the wider and narrower parts of the Tube*.—In ampullary pregnancy, one part of the ovum rises like a hill above the surrounding mucosa, toward the lumen of the tube. The expression “decidua reflexa” for this section is, on histological grounds, inapplicable; it might be termed the internal segment of the fruit-sac.

In pregnancy in the isthmus of the tube, one finds that a growth of the ovum, or of its bed, towards the core of the tube, soon invades the entire lumen, and that the innermost layers of the tube wall become necrotic and, broken back from the ovum, soon completely disappear.

The chief difference in such an ovum from one embedded in the uterus, is that the cells of foetal origin at its periphery are present in much greater number.

The bed of the ovum is formed of the muscular tissue of the wall and of connective tissue, with which the chorionic villi connect themselves. At the junction of the foetal and maternal tissues a strip of fibrin can be made out, analogous to Nitabuch's fibrinous layer, the origin of which is

either coagulation necrosis or a fibrinous degeneration of maternal tissue. At the limits of the maternal layers one finds the tissues permeated by isolated cells of the chorionic ectoderm which are not decidual cells, though very like them. Just as no decidual cells are met with in the inter-muscular connective tissue of the uterus, so in the tube, where the ovum is embedded in connective tissue, one does not meet with decidua.

(3) *Membrana Reflexa (Capsularis, internal Segment of the Sac)*.—The muscular elements in the reflexa are explained by the way in which the ovum embeds itself. The original reflexa, as a rule, does not persist long, but from want of nourishment soon becomes necrotic, and the ovum, growing through it, attaches itself to the tubal mucosa and grows through that also.

(4) *Condition of the Tube outside the limits of the seat of the Ovum*.—Inflammatory disease of the tubes is frequently found with tubal pregnancy, and undoubtedly there is a casual connection between them. This has been very clearly pointed out in a recent work by Opitz, who on examining 23 tubes, in which pregnancy had not gone beyond one month, found in all but one, and in every layer of the tubal wall, indubitable signs of inflammation anterior to the commencement of the pregnancy. The presence in tubal gestation of blind offshoots from the mucous membrane lined with epithelium, may possibly be accepted as merely a result of a proliferation of epithelium set up by the pregnancy.

(5) *The Anatomical results of the interruption of the Pregnancy in the earlier months. (Rupture and Abortion)*.—The maternal tissue is melted away wherever it comes in contact with the luxuriantly growing trophoblast, of which the special prey are the vessels in the walls. *Rupture* arises from the wasting of the tissue in the base of the bed of the ovum; *abortion*, on the other hand, from the destruction of the layer of the reflexa which shuts off the cavity of the ovum from the lumen of the tube. External rupture of the fruit sac would be a better term for rupture, and internal rupture of the fruit sac for abortion.

Upon internal rupture of the sac, in rare cases, a hæmatoma is formed in the tube, but as a rule the blood pours through the open infundibulum into the posterior cavity

of the pelvis and becomes encapsuled there. Infection of the contents of the hæmatocele through the patent tube is then not more probable than the discharge of the liquid blood it may still contain. In external rupture of the sac the result is generally free hæmorrhage into the abdominal cavity, very rarely hæmatocele.

According to Saenger's classification one distinguishes solitary hæmatocele from diffuse, if the capsule completely surrounds the effused blood. The wall of a hæmatocele that can be shelled out, must *a priori*, consist, not of fibrin, but of new formed connective tissue, which is derived from the serosa at first next the effusion.

Tubal abortion is possible only in ampullary pregnancy, but if the ovum is situated in the peculiarly narrow isthmical part of the tube, the bed of the ovum may, without open external rupture, be converted into a hæmatoma.

(6) *Ovarian Pregnancy*.—Of the earlier observations of ovarian pregnancy, those which were not open to objection were all in the later months, but more recently instances have been demonstrated in the earlier stages of gestation. The researches of van Tussenbroek have proved that implantation can certainly take place inside a follicle; the follicle in which the ovum has been fertilised and embedded passes normally into a corpus luteum, while the seat of the ovum in its wall undergoes its further development; there are no decidual elements at all, as Franz was able to ascertain in his case. From recent researches it appears that the implantation may occur even in the epoothoron, the ovum making its bed in some deeply penetrating furrow in the albuginea, or invagination of the germinal epithelium.

In ovarian pregnancy, as in tubal when far advanced, one may distinguish forms with from those without a pedicle. The former, as regards their position and the formation of the pedicle, resemble other ovarian tumours. It seems to be the exception for an ovarian pregnancy, as it is for other ovarian tumours, to develop within the ligament.

In regard to the anatomical diagnosis. In the early stage of the pregnancy the organic connection between the fruit sac and the ovary is easily demonstrated and is a sufficient foundation for the diagnosis. Later on extensive adhesions, intraligamentary development, and the increasing

pressure of the growth of the ovum, may lead to the destruction of the specific structural elements of the organ from which the wall of the sac is derived, and consequently the demonstration of follicles or of involuted forms of such may, even in the recent condition, be impossible. On the other hand, the presence of definite constituents of ovarian tissue in the wall of the fruit sac may lead to mistake, for even in tubal pregnancy it is not impossible that, owing to broad adhesions or intraligamentary development, the ovary may seem to enter into the formation of the wall of the sac.

We must consider the ovarian origin of a fruit sac which, from its relations to the broad ligament and to the uterus must be derived from one of the adnexa, to be proved, if it can be demonstrated that neither the tube nor its fimbria have any share in the formation of the sac, always provided that at the same time the possibility of pregnancy in an accessory tube may be excluded.

It is a question whether in ovarian pregnancy any process corresponding to tubal abortion ever can happen, *i.e.*, evacuation of the follicle through the unclosed seat of its rupture. An occurrence that, relatively, is not infrequent, is early intracapsular hæmorrhage with, or more rarely without, secondary rupture of the bed of the ovum. Owing to its comparatively good supply of nourishment the sac may be able to retain the ovum for a considerable time. Indeed, the comparatively great frequency with which a dead mature foetus remains aseptic or is converted into a lithopædion may perhaps be attributed to a favourable supply of blood to the foetal sac.

(7) *Interstitial Tubal Pregnancy*.—Though 44 unimpeachable instances of interstitial pregnancy have been recorded, very little is known of its minute anatomy. Even the investigation of the anatomical causes of its occurrence remains open to research; probably here also we have to do with some previous inflammatory process such as Opitz and Micholitsch have described generally.

The development of the seat of implantation in interstitial pregnancy in which the bed lies within the uterine wall, takes its course upwards in the line of least resistance.

An open communication between the foetal sac and the cavity of the uterus has been met with, but only in a few

cases, and no cause for such can be suggested save the bursting of the contents of the sac into the uterine cavity.

In making an anatomical differential diagnosis, the distinctive signs laid down by Ruge are very valuable; an inclined position of the uterus and consequently a well marked difference in the level of the departures of the adnexa and especially the tubes from the uterus. But the internal connection should be made out as well as the external, and it should be demonstrated that at the side of the foetal sac there is a depressed angle in the cavum, corresponding to one of the tubal apertures, furthermore the mouth or the uterine end of the tube not involved in the sac should be found. If macroscopic examination of the specimen did not afford this evidence, it might be obtained by the microscopical examination of a series of sections.

In 32 cases of rupture, except in one instance not accurately observed, the greatest thinning of the sac and the seat of the rupture was in the posterior wall.

VEIT, in connection with his report, said that the contradiction in the opinions expressed by himself and Werth lay in the different views they took of the anatomy of the implantation of the ovum. An extrauterine ovum was not to be considered a malignant growth; the ovum did not, in his opinion, grow into the maternal tissues as Werth supposed from the alterations in the musculosa, but embedded itself in a pre-existing cavity. Their views as to the reflexa also differed; the question whether the opening through which the ovum forced its entrance, closed automatically or not, must, owing to the paucity hitherto of intact early specimens, remain open.

WERTH, the second reporter, defended his view that the ovum was a malignant growth, although the expression could not be applied generally, but only to some cases. Young ova were particularly dangerous, and therefore while a pregnancy of three months should always be removed, one that had persisted longer might be left and kept under observation. The foetal cells attacked the maternal vessels; the villi did so also, a process Veit called "deportation"; but that description did not in any way elucidate the development, nor explain the destructive effect of the growth, an effect that was due to the cells which formed the investment of the villi. The ovum embedded itself

in the muscularis, not in the mucosa, and by its growth thrust the layers asunder.

ON SIMULATED EXTRAUTERINE PREGNANCY.

H. W. FREUND pointed out that extrauterine pregnancy might be simulated by the following conditions:—

(1) *Hæmatocele, retrouterine or, more rarely anteuterine.*

This, he said, was the result of mechanical hyperæmia, or general venous congestion, much oftener than had been supposed and quoted Santer, who at the autopsies on 14 women who had suffered from disease of the heart or lungs, from nephritis, endarteritis, &c., was able in 7 cases to demonstrate a retrouterine hæmatocele or its consequences. During the last two years Freund had operated upon 10 true and 5 simulated extrauterine pregnancies. Among the latter there were two simple hæmatocèles, one in a woman with a fatty heart (posterior colpotomy, internal genitals quite normal), the other an enormous hæmatocele anterior and posterior to the uterus, in a woman of 25 years, who five months previously had had her second normal labour and was still suckling. At the laparotomy both tubes markedly congested with somewhat thickened walls were found in the effused blood, but neither of them was swollen or contained anything abnormal. In this case the puerperium and lactation may have been factors in the mechanical congestion that, perhaps under the influence of commencing menstruation, brought about the serious abdominal hæmorrhage.

(2) *Tuberculosis.*—Freund related the following cases:

(a) A young choleric infantile nullipara, who after some attacks of *mittelschmerz*, suffered at her menstrual period from an attack of violent pain, and for three days afterwards from prolonged fainting fits. A retrouterine hæmatocele apparently developed, and after two months' conservative treatment was slowly absorbed. The uterus was relaxed, slightly enlarged, elevated and though there was no proper menstruation, discharged daily a quantity of brownish blood; behind it there was a soft immoveable tumour of the left adnexa as large as a goose-egg. The clinical symptoms and bimanual examination, therefore, would have left no doubt as to a diagnosis of extrauterine pregnancy had not the patient been a *virgo intacta*, with

an abnormally narrow hymen. Although no nodules were to be felt, the abdomen was sunk in, and there was no fever, tuberculosis of the tube was diagnosed as the most probable condition. On laparotomy, extensive tuberculous peritonitis was revealed, the tubes externally, like the other organs, were covered with nodules, but were not the seat of the primary disease. The tumour consisted of the left adnexa glued to some intestine. It disappeared very rapidly without anything being extirpated, and the woman got perfectly well. (b) A poorly developed and very debilitated woman, aged 21, who had passed through two normal confinements, was admitted on account of fainting fits and abdominal pain. A large extravasation in Douglas's pouch, upon which the thickened adnexa of the left side descended, justified along with the clinical symptoms a diagnosis of extrauterine pregnancy. The hæmatocele was evacuated and the left adnexal tumour removed by posterior vaginal cœliotomy. Not a trace of products of gestation could be found in the tube, which was, however, the seat of chronic hæmorrhagic inflammation. Now this woman, who did not in the least gain strength after the healing of the wound, developed in the course of the next year pulmonary tuberculosis. Later on the right adnexa became swollen, but without giving rise to hæmatocele or serious accidents.

(3) *Adnexal Tumours*.—In a patient, aged 39, who had borne five children, after the missing of two periods and under symptoms of grave anæmia, a not very extensive extravasation developed in Douglas's pouch and the ante-uterine space, as well as a soft adnexal tumour in the latter which gave rise to protracted floodings. On anterior colpotomy, chronic peritonitis was discovered, a moderate amount of clear ascitic fluid, and in front of the uterus a corpus luteum cyst of the right ovary after the extirpation of which the woman got well. Freund dwelt particularly on the adnexal tumours, such as (b) above mentioned. Characterised by chronic hæmorrhagic salpingitis, they may, as he demonstrated at the Giessen Congress, in their gross anatomical features simulate the appearance of tubal pregnancy. Microscopical examination reveals moderate proliferation of the mucosa, infiltration of leucocytes, increase of connective tissue, dilated capillaries, and

occasionally even angiomatous vascular development. In four of such cases, clinically and anatomically most deceptive, even the examination of series of sections did not disclose a trace of chorionic villi; there was therefore no ground for a diagnosis of extrauterine pregnancy. The hypothesis that the ovum had fallen out of the tube and disappeared is untenable in the face of the submucous tubal implantation, and the deleterious proliferating powers of the villi.

Just as a mechanical hyperæmia may be the cause of hæmorrhage from the peritoneal vessels into Douglas's pouch, it may also under the conditions above mentioned give rise to hæmorrhage into the lumen of the tube, or even at the same time into Douglas's pouch. The whole question is thus brought into near relation to malformations, constitutional anomalies, and vascular modifications of the female genital system. Of this Freund offered examples at the Giessen Congress. He concluded by referring to analogous hæmorrhages in the mucosa and into the cavity of the uterus in apoplexy of that organ, which v. Kahlden referred to the contraction of the arteries and dilatation of the corresponding veins; to ovarian hæmatoma in local and general hyperæmic or congestive processes; and to the hæmatosalpinx due to congenital or acquired tubal atresia.

TREATMENT.

SARWEY, Tuebingen, said that the expectative and operative methods each had their advantages and disadvantages; the former entailed protracted treatment, left the woman unfit for work for a long time, and frequently exposed her to the dangers of an operation later on. Moreover, even when the foetus was dead there was constant danger of rupture, so that it was desirable in all cases of expectative treatment to have the patient under constant care. Of the various operations, colpotomy might be considered when there was no complication or difficulty, otherwise laparotomy was preferable; the combined method was sometimes quite justifiable. Infected hæmatocele should be dealt with from the vagina. Tubal pregnancy might be complicated by adhesions, ovarian tumours, intramural myoma, &c.

He held operative treatment to be indicated in the latter half of pregnancy, in all cases whether the child was dead or alive; in the early months, when the child was living; and directly by rupture. On the other hand, expectative treatment was contraindicated by decomposition of a hæmatocele, and by severe pain from pressure on the bladder or lower bowel.

He exhibited the lithopædion of Leinzell, which had been found at the autopsy on a woman, aged 94.

CLINICAL STUDY OF A GRAVID UTERUS AT TERM, FIXED IN LATERAL RETROVERSION BY PERIMETRIC ADHESIONS.

PINARD, SECOND, and COUVELAIRE (*C. R. Soc. Obst. Gyn. Pæd.*, 1903, May), from an exhaustive study of a case in which the uterus was amputated after the child had been extracted by Cæsarean section, formulated the following conclusions: (1) Extensive perimetric adhesions fixing the uterus in an irreducible malposition are not incompatible with the development of pregnancy to term. (2) In the case considered, the great deficiency in the development of the adherent posterior wall of the gravid uterus fixed in lateral retroversion was compensated by exaggerated development of the free surface of the anterior wall. (3) The irreducible fixation of the uterine body in lateral retroversion also led to an atypical development of the inferior segment—that is to say, to an enormous distension of that portion of the uterus upon which the axis of the deviated uterine body ended. (4) The irreducible malposition of the foetus corresponded with the complex distortion of the uterus, and the unequal development of its walls. (5) The consequent dystocia necessitated the Cæsarean section and hysterectomy in the interests of both mother and child. (6) The intervention was completely successful as regards both.

P. Z. H.

SOME OF THE RARER CAUSES OF HABITUAL ABORTION.

KLEINWAECHTER (*Zeitschr. f. Geb. u. Gyn.*, Bd. xlix., Heft 1) agrees with Olshausen that one of the rarer causes of abortion is laceration of the cervix; but if the laceration is repaired a subsequent pregnancy will often proceed to term, as Kleinwachter has seen happen twice in eleven cases of the kind. Among other causes of habitual abor-

tion which are not generally known, he mentions the residues of past inflammation of the pelvic peritoneum, three or four instances of which he has met with. Sterility is usually associated with exudations in the parametrium, and even should conception occur the pregnancy seldom persists to term. He has also seen abortion due to various other morbid processes; to fibroma of the uterus, four times; to heart disease, three; to diabetes mellitus, twice; to hydramnios in two instances, and to pulmonary emphysema in one.

PROPHYLACTIC REMOVAL OF THE APPENDIX DURING PREGNANCY.

MONOD (*C. R. Soc. Obst. Gyn. Pæd.*, 1903, May), in pregnant women who before conception have had repeated attacks of appendicitis terminating in resolution, recommends the removal of the appendix in the early months of gestation, before any acute symptoms have appeared, and considers that pregnancy, so far from being a bar to operation, is rather an additional indication for immediate surgical intervention. He reports three cases in which he operated successfully, and gives the following reasons for his opinions: (1) Every appendix that has been the seat of true inflammation is a potential cause of accidents, the importance of which it is not possible to estimate; it is therefore wiser to remove such an appendix than to wait for a fresh attack. (2) The removal of the appendix before the onset of acute symptoms is particularly desirable in a pregnant woman, owing to the extreme risk incurred in acute inflammation of that viscus during gestation. Such an attack in most instances causes premature labour or abortion, and menaces the life of the foetus, as well as that of the mother. According to Baptiste, the mortality of puerperal appendicitis is 26 per cent.—more than half as much again as the mortality at other times—and the mortality of the children is even higher, for it reaches 50 per cent. (3) Gravidity does not complicate the operation in any way, nor has the operation any untoward effect upon gestation. It is of extreme importance as regards the result to be able to choose a convenient time and place for the operation, in the absence of any acute symptoms, and as early as between the third and fourth month, so as

to avoid the difficulty that the enlargement of the uterus in the latter months might offer. Finally, Monod concludes: The removal of the appendix in the absence of any acute inflammation is indicated in every person who has had a single attack of appendicitis, and is so especially in the case of a pregnant woman in whom the operation should preferably be performed between the third and fourth months of gestation.

P. Z. H.

OSTEOMALACIA ; TOTAL CASTRATION DURING PREGNANCY.

FOCHIER, Lyons (*Academie de Médecine*, 1903, April 14), related an extremely interesting case in which he removed the gravid uterus and ovaries in the fourth month of pregnancy, in order to arrest the rapid progress of deformation of the pelvis, and obviate the necessity of Cæsarean section. In performing the operation on January 21, 1903, the ovarian and uterine arteries and the round ligament were tied, and the uterus was amputated at the level of the vaginal insertion. The patient declared the same evening that she was relieved from the intense pain from which she had been suffering, and made an uneventful recovery. She left her bed on February 10, and then began to take daily one milligramme of phosphorus dissolved in oil. This was continued, and on April 7 her medical attendant wrote: "I have found her so much improved as to justify the prediction of a definite and rapid cure. She no longer has any pain, has a good appetite, and digests well. She can walk about and attend to her domestic duties without trouble, whereas before the operation she could not drag herself around the room without the help of a stick. Her mental condition is excellent."

P. Z. H.

GUENIOT did not believe that the removal of the ovaries, still less of the uterus, was always necessary to arrest the course of osteomalacia, a result that could generally be attained by terminating the pregnancy. Cæsarean section, as in a case he had previously reported, allowed the woman the chance of again conceiving. FOCHIER explained that he did not advocate the removal of the ovaries and uterus in osteomalacia except when the disease was progressing rapidly, and promised to end fatally within a short time.

PREGNANCY COMPLICATED BY FIBROID TUMOUR.

A discussion on this subject at the American Gynæcological Society (*Amer. Jour. Obst.*, June, 1903), was opened by HENRY COE, who thought that, other things being equal, the wider a man's obstetrical experience, the more he would be inclined to assume an expectant attitude, knowing that nature often overcomes obstacles which at first sight seem to be insuperable except by the aid of the accoucheur. It was easy to overlook the fact that a patient with a large tumour was two or three months pregnant.

He classified the cases under three heads: (1) Those in which pregnancy would doubtless go to full term with the prospect of a normal delivery; and in which the treatment was entirely expectant. (2) Those requiring constant observation with the possible anticipation of the date of normal delivery. (3) Those in which there was considerable risk to the mother or child, or both, before and during labour, and requiring surgical treatment either conservative or radical.

The rate of growth, the size and the location of the tumour had all to be considered. For a fibroid low down in the pelvis which, even under an anæsthetic, could not be dislodged, the simplest plan was to empty the uterus. A myomectomy could be done subsequently. Myomectomy for anything except distinctly pedunculated tumours was, as a rule, followed by abortion. No good object was served by removing sessile tumours during pregnancy unless there were urgent symptoms, such as cardiac, renal or pulmonary complications, œdema, intestinal obstruction, any of which, apart from constant pain and impairment of the general health, might render a radical operation imperative. In the last three months of pregnancy more attention would be concentrated on saving the child, providing always that the maternal risk was not too great. The risk to the child might be diminished by inducing labour a month before it was due. It might become evident that the growth of the tumour had progressed so that a child, even at only the seventh month, could not possibly be delivered *per vias naturales*. He would then prefer to anticipate the date of labour if thereby a live child could possibly be born. After the eighth month one should delay as long as possible and then perform an elective section near or

at term. The decision as to the extent of the operation would depend upon the wishes of the patient, as well as the bias of the surgeon. The question of suprapubic amputation, *versus* hysterectomy, was not discussed.

TABER JOHNSON was in favour of the more conservative operation of myomectomy, as compared with hysterectomy, when the tumour was so situated as to threaten the safe continuance of the pregnancy or to jeopardise the life of the mother during labour. The dangers to the mother were not passed with the difficult, though successful, delivery of her child. The complicating fibroid might be of the submucous or interstitial variety, and so interfere with the safe and normal contraction of the uterus as to permit and indeed to cause an uncontrollable *post-partum* hæmorrhage. If surgical relief was imperative it must be by a major operation, hysterectomy or myomectomy.

HARRISON said that the dangers incidental to this complication were overrated. The influence of fibroids on fertility depended largely on the site of the tumour or tumours. Those which were subperitoneal offered little or no hindrance to conception, nor did interstitial ones, unless large. The influence of fibroids on the pregnancy was usually to cause its premature termination. Placenta prævia was common and during gestation a fibroid would often grow quickly and undergo œdematous softening. Another effect of such rapid growth was to cause severe compression of the abdominal and thoracic organs. The influence of fibroids on labour differed very widely according to their situation. Subserous myomata as a rule produced no disturbances, but one growing from the cervix might constitute an absolute obstruction to the delivery of the child. With the ascent of the uterus interstitial myomata usually receded from the pelvis. Severe hæmorrhage occurred rarely in the third stage of labour. With reference to treatment no general rules could be given applicable to every case. Operative intervention was seldom indicated. The artificial interruption of pregnancy was attended with grave dangers and should not be entertained. When symptoms showed themselves which made the further continuance of the pregnancy a menace to life, a very rare contingency it must be admitted, laparotomy was indicated either for the performance of a myomectomy or supra-

vaginal amputation of the uterus. It was only when the symptoms caused by the myoma jeopardised life and health, that an operation was justifiable. During labour, if the tumours were high up the treatment should consist of masterly inactivity ; if they projected as polypi they should be at once removed ; if they were wedged in the pelvis attempts at reposition should be made and even if this could not be effected hopes might still be entertained, if the limitation of space were not excessive, that the serous infiltration of the tumour would have softened it to such a degree as to allow the passage of the child. Podalic version was preferable to the high forceps. When there was an absolute obstacle to delivery Cæsarean section must be performed.

REYNOLDS mentioned 3 cases in which a large incarcerated fibroid was kept within the bony pelvis, so that the finger could only with difficulty be introduced between the tumour and the symphysis, but that in each case the woman was delivered either normally or by forceps. These results were due to the softening of the tumour.

DUNCAN EMMET approved of conservative treatment and if an operation had to be performed he preferred myomectomy to the removal of the uterus.

PRYOR emphasised the necessity of recognising the softening effect of pregnancy on the tumour. Tumours on the posterior uterine wall were more serious than those on the anterior and might require myomectomy. Mammary extract should be administered to the patient for he had seen fibroids distinctly diminish in size under its administration.

FRY did not believe in emptying the uterus prematurely. Tumours apparently certain to cause obstruction, might rise up or might soften so as to permit the passage of the child. He preferred, if a radical operation had to be done, hysterectomy to myomectomy.

PETERSON did not think that tumours softened under the influence of pregnancy. He advocated their removal by myomectomy.

ENGELMANN had observed softening and disappearance of fibroids after confinement in two cases, both of them subserous tumours. He concurred as to the good effects of the administration of mammary extract.

GREEN spoke of 3 cases in which a large fibroid tumour had caused no trouble during pregnancy and had diminished in size after the confinement.

EDGAR said that in a large number of cases the tumours caused absolutely no obstruction that could not be overcome by a difficult version or by a difficult forceps, or by nature with prolonged labour.

JOHNSTONE said that the duty of the obstetrician was to watch the case and guide it to a successful termination. Tumours diminished in size after the confinement.

J. F. J.

WHAT IS ECLAMPSIA ?

BANDLER (*Amcr. Jour. Obst.*, April, 1903) discusses many of the theories as to the cause of eclampsia, and points out that it is a disease characterised by distinct pathological lesions, simulated by no other known condition. Quoting Schmorl he gives the lesions as follows :—

(1) *Kidneys*.—Parenchymatous degeneration, glomerulitis, thrombi. (2) *Liver*.—Multiple hæmorrhages and necroses. Hæmorrhagic and anæmic necroses of the liver with thrombi in the intra- and inter-lobular branches of the portal vein. (3) *Heart*.—Hypertrophy of the left ventricle, multiple hæmorrhages and necroses and parenchymatous degeneration. (4) *Lung*.—Hyperæmia and œdema of the lungs. Thrombosed capillaries. Placental cell emboli. (5) *Brain*.—Punctate hæmorrhages in the brain with areas of degeneration near the thrombosed vessels. (6) *Pancreas and adrenals*. Hæmorrhages and necroses. Parallel lesions are noted in a large proportion of the infants.

Whatever the substance may be which primarily or secondarily causes eclampsia it is probably the same substance which produces the albuminuria, the nausea, and the kidney of pregnancy. Uræmia is not a primary cause. The diminished excretion of urea is the sequence of pregnancy and the kidney lesions, and does not lead to the changes found in eclampsia. The two primary factors remaining are the placenta and the secretion of some maternal organ, probably the ovary.

The embedding of the ovum, the formation of the liquor folliculi, the escape of the ovum, and the formation of the

trophoblast, cells which invade and destroy the decidua from the ectoblast of the ovum, all point to a bio-chemical action on the part of the ovum. The trophoblast cells are continually entering the blood of the mother and thus constitute a placental secretion.

The maternal blood in the intervillous spaces circulates round the foetal trophoblast cells, corrodes them and changes them into syncytium. The decidua is gradually destroyed by the trophoblast cells and by the villi; there is thus antagonistic action on the part of the decidua, and the maternal blood. We may grant then to the maternal blood the possession of an element or enzyme, which limits and opposes the growth of the trophoblast cells and controls the action of the trophoblast cells and their enzymes.

In hydatid mole and chorioma there are pathological local evidences of a lack of sufficient antagonistic resistance to the foetal cells and enzymes, by the maternal cell enzymes. The maternal enzymes cannot hold the action of the foetal cells in check.

The lesions of eclampsia are an evidence of the same factors, except that instead of being local, the disease is a constitutional pathological mal-relation between the foetal and maternal enzymes.

Fifty per cent. of the cases of chorioma follow the presence of hydatid mole. The local lesions in chorioma are due to the same invasion by foetal cells as takes place in normal placentation except that the growth is unlimited and not held in check. The foetal cells invade capillaries and vessels and cause hæmorrhage. They produce areas of degeneration and necrosis. When carried off into the circulation they set up malignant metastases. Granted a like pathological power to the secretion of the placenta as is here evidenced by the cells, we should expect the resulting microscopical thrombosis, degeneration and necroses in the heart, brain, liver, kidneys, lungs, &c., which are actually found.

From all that is known of the secretory functions of the ovaries and of the importance of those organs in maintaining the nutrition of the genitalia, it seems possible that the ovary furnishes to the mother the elements or enzymes which oppose and antagonise the growth of the foetal cells, and the action of the placental enzymes.

That the placenta is a gland giving off into the maternal circulation elements derived from its trophoblast and syncytial cells is, in Bandler's opinion, beyond question. That it acts upon the maternal blood, and is in turn influenced by the latter is likewise indubitable. We must presuppose some element in the maternal circulation whose function it is to resist, modify or counteract to a definite extent the action of this placental secretion. He believes that the ovary furnishes this element, and that a mal-secretion on the part of the placental gland, or a relative mal-secretion due to insufficient or abnormal modification of the placental secretion by the elements furnished by the ovaries, furnishes the most plausible and logical explanation of the lesions of eclampsia.

It explains the pathological lesions revealed by the microscope, and also the irritation of the kidneys. When fecundation takes place the ovum and its enzymes nullify the menstrual stimulation and excretion of the ovarian secretion. The trophoblast cells invade the maternal decidua, which is then constantly stimulated by the ovarian secretion, and find their way into the maternal blood. A normal gestation is accompanied by the stimulating effects of the retained ovarian secretion, and the ovarian and placental enzymes are then opposed in their action. No menstruation occurs, for the placental secretion nullifies the action of the usual forces. At the end of nine months, when the ovarian secretion is sufficient to overcome the enzymes of the ovum, labour occurs. A pathological ovarian or placental secretion, or a failure in the proper antagonism between the two will cause eclampsia.

J. F. J.

IMMEDIATE DELIVERY THE BEST TREATMENT FOR ECLAMPSIA.

BUMM, Halle (*Muenchener, m. Wchns.*, 1903, No. 21), discusses the various methods of treating eclampsia on the basis of his experience of 112 cases, nearly all severe ones, in his own hospital and consulting practice. From 1882 to 1895 he tried symptomatic treatment with narcotics in 47 cases; chloroform in 12, morphia in 31, and chloral hydrate with morphia in 4. There were fifteen deaths, a mortality of 30 per cent., and he could not see

any definite difference between the results of these different narcotics. From 1895 to 1900, on the revival by Bouchard and his school of the old theory of Frerich's, that eclampsia depended on an intoxication of the system by constituents of the urine, he treated 43 cases by morphia, with the addition of the free use of diaphoretics, and, moreover, in seven of the worst cases by venesection and transfusion. There were thirteen deaths in all, a mortality of 30 per cent.

From April 1, 1901, every eclamptic woman in the *Hallé Klinik* has been treated upon the principle of emptying the womb at once, that is to say, those attacked in the *Klinik*, after the first or second fit, and the others within at most half an hour after their admission, no matter what stage of labour they were in. There have been 25 cases, 1 abdominal and 7 vaginal Cæsarean sections, 7 deliveries by forceps, 6 combined podalic version and extraction, 1 delivery by the presenting foot, and 1 perforation of a dead child; one woman was spontaneously delivered directly after her first fit, and another did not have a fit till her child was born. Of all these only three died, a mortality of 12 per cent. One woman was admitted in a comatose condition after twelve fits and eleven hours after the first, and died three hours after admission, having been delivered by version and extraction; a second was moribund on admission and died in an hour; the third was admitted in deep coma, delivered by version after incisions in the cervix, recovered consciousness in twelve hours and had no more fits; free micturition was established, and her intelligence was completely restored, but symptoms of aspiration pneumonia set in and she expired.

Compared with the 30 per cent. mortality under the narcotic and diaphoretic treatment; compared also with the mortality in the *Klinik*, which from 1887 to 1894 was 32·8 per cent., and from 1894 to 1900 20 per cent., the last series of cases shows a remarkable improvement; moreover, the two cases admitted in a hopeless and moribund condition hardly enter into the question of the value of the treatment. Bumm admits that the numbers are small, and that the element of chance has much to do in eclampsia, but, more than by the improved mortality, he is impressed by the fact that every additional case supported the feeling that by immediate delivery a surer standpoint

had been taken, and a really beneficial method of treatment been attained. More than half the cases were severe; in fourteen the onset of the convulsions was during pregnancy or in the earliest stage of labour; fourteen of the women were on admission already in deep coma, and from all his previous experience he is sure that under expectation and morphia at least one-third of the cases would have died. He says, "The experiences of the last two years have forced upon me the conviction that, as a rule, especially when the eclamptics are seen shortly after the first attack, with a pulse still good and no pulmonary symptoms, a favourable termination of the disease may be brought about by immediate delivery, and that by the general adoption of this method of treatment the mortality of eclampsia may be reduced to one-fourth of its present amount, that is, to 5 per cent.

SECTIO CÆSAREA IN ECLAMPSIA.

STRECKEISEN, Muensterlingen (*Archiv f. Gyn.*, Bd. lxxviii., S. 678), has collected all the cases of Cæsarean section for eclampsia published since 1897, and to these thirty-three adds two personal observations, both twin births, and very serious as regards the eclampsia. In one case both children were macerated and the mother died; in the other mother and both children lived. A critical review of the whole leads him to the conclusion that Cæsarean section in eclampsia is only to be undertaken as a last resource to save mother and child when other means prove useless.

ON CLAMPING THE UTERINE ARTERIES FOR POST-PARTUM HÆMORRHAGE (HENKEL), AND ON DILATATION OF THE CERVIX (BOSSI).

LABHARDT, Basle (*Zentralb. f. Gyn.*, 1903, No. 28), reports the case of a septipara, aged 37, in which at the tenth month both the above methods were employed, owing to suppurating meningitis. A living child was artificially delivered with ease after the use of the dilator; but after the removal of the placenta, although the uterus was well contracted, there was profuse hæmorrhage owing to a deep laceration in the right side of the cervix. The bleeding was arrested by clamping the uterine arteries in

Henkel's way, but the woman died in six hours, and section revealed purulent leptomeningitis and the laceration just mentioned. The uterine artery on the side of the tear was compressed by the clamp, but that on the other side was quite permeable. Henkel's method, therefore, does not seem to be properly reliable.

ON CIRCULAR LACERATIONS OF THE CERVIX DURING LABOUR

BOUDREAU (*Thesis*, Toulouse, 1902 ; *Zentralb. f. Gyn.*, 1903, No. 26) reports seven cases which show that with careful antisepsis the above accident may happen without detrimental results to the mother. He places œdema in the foreground as the first hint of danger, and therefore when this is present the course of labour must be most carefully watched. The fundamental cause of the phenomenon is described to be feeble uterine contractions, with deficient expansion of the os uteri. The only pathological lesion to be detected in the tissues of the lacerated part by microscopical examination, were extravasations of blood and œdematous infiltration. The partially detached portions should be cut away with scissors.

SPONTANEOUS RUPTURE OF THE UTERUS IN TRAVAIL AND CHILDBIRTH.

SCHMITT (*Thesis*, Nancy, 1902 ; *Zentralb. f. Gyn.*, 1903, No. 26) bases his thesis on 275 cases collected from various sources, especially from Klien's work to which he refers in every chapter, and with the conclusions of which he agrees, inasmuch as he holds that operation should be confined to those cases in which no other means of arresting the hæmorrhage is effective, or in which the child, in the abdominal cavity, cannot be extracted through the genital canal. Otherwise he recommends drainage by a rubber tube, which in the more recent cases secured forty-eight recoveries in forty-nine cases. Out of his 275 collected cases, 137 died, and 138 recovered. The prognosis of operation is much more unfavourable when the patient has to endure transport into hospital, and is worse the longer the interval since the rupture. When the hæmorrhage is persistent, laparotomy gives the best results, fifty-eight recoveries to forty-six deaths.

UTERUS BICORNIS: TREATMENT OF RETENTION OF THE AFTER-COMING HEAD.

FRANGOPOULOS (*Thesis*, Lyons, 1901; *Zentralb. f. Gyn.*, 1903, No. 26) reports: In a primipara (!) of thirty-seven, who three years previously had had an abortion so simple as not to require the assistance of even a midwife, the medical attendant—after long labour the breech presenting—succeeded in extracting the trunk with some difficulty, but the head was retained. The patient was brought from a distance of forty-five kilometres into the Lyons clinic, where it was ascertained that the uterus was bicorned, and the os, which had again contracted, was made to admit the passage of four fingers. As it was found impossible to extract the head, a Porro operation was performed, from which the woman made an uneventful recovery. From this personal observation and a large number previously published, the author concludes that in similar circumstances, when the woman is not infected, an endeavour should be made to remove the head by the vagina, but that when infection is present, or when there is malformation of the uterus, hysterectomy is indicated.

PUERPERAL ENDOMETRITIS. SUCCESSFULLY TREATED BY NAPHTHALINE.

POLIANSKY, Tamala (*Semaine Médicale*, 1903, No. 25), has recently treated three cases of puerperal endometritis successfully by single intrauterine application of naphthaline, without the use of the curette. This treatment was recommended some three years ago by Kirsner, another Russian physician (*ibid.*, 1900, p. 230), whose method consisted in plugging the uterus with a long strip of gauze impregnated with glycerine of ichthyol (8 : 1), and powdered over with pulverised naphthalin.

TREATMENT OF PUERPERAL INFECTION.

WETHERILL (*Amer. Jour. Obst.*, May, 1903) emphasises the limitations and dangers of the uterine curette and douche. The curette is useful when there are retained putrefying products of conception, but in true septicæmia it does infinite harm. Septic cases with a pulse rate of 120 or over should be spared the administration of an

anæsthetic, which only puts extra work on an already overburdened kidney. He condemns the ordinary vaginal and uterine douches, antistreptococcic serum, unguentum Crèdè and purging, but considers the instillation of normal saline solution to be most valuable—since it fills up the blood vessels and promotes elimination without depleting. The same treatment must be adopted that is indicated in other intra-abdominal infections, with the addition of drainage by tubes and intrauterine irrigations of alcohol. There must be rest in bed, no purging and no food by the mouth; if there be nausea and vomiting the stomach must be repeatedly washed out and food and injections of salt solution given by the rectum.

With strict asepsis and a good light the cervix is to be drawn down with volsellum forceps and the cervical canal wiped out with gauze. The uterine cavity is then gently irrigated with salt solution, or if there be a streptococcic membrane, wiped out with pure carbolic acid. A double current drainage tube, of as large calibre as can be easily introduced, is passed to the uterine fundus. Some 50 per cent. alcohol is thrown with a glass syringe through each tube. The vagina is lightly packed with gauze, and the patient returned to bed. Perfect drainage of the infected cavity is thus ensured, as well as a means of applying through the tubes a most potent antiseptic to the seat of the disease. At short intervals the nurse can inject into the tubes from 2 to 4 ozs. of 50 per cent. alcohol. The tubes and gauze can be left *in situ* from three to fourteen days, and be kept free from obstruction by the strong action of a good syringe. The results of this treatment have been really excellent, except in very advanced cases when the septic process has been too diffused.

J. F. J.

ON THE INDICATIONS FOR HYSTERECTOMY IN ACUTE
PUERPERAL SEPSIS.

Proceedings of the International Congress at Madrid.

CORTIGUERA, Santander (*Zentralblatt fuer Gynaekologie*, 1903, No. 26), commissioned to report on this subject, in order to make his investigation as exhaustive as possible, not only carefully studied all that has been published upon it, but sought for the opinion of sixty-two Professors of

Gynæcology and Obstetrics in various parts of the world, asking for the reports of any cases hitherto unpublished. The first part of his report is devoted to a well arranged reproduction of the reported cases; the second to the discussion of the different forms of puerperal fevers. The conclusions arrived at are as follows: (1) With careful prophylaxis, puerperal infection will hardly ever occur. (2) Nearly all forms of puerperal infection are amenable to intra-uterine treatment suitably chosen and systematically applied. (3) In a few exceptional cases in which local measures fail to subdue the septic toxæmia, hysterectomy is indicated. (4) Infections localised in the uterus, the adnexa and the pelvic peritoneum, are those which mostly justify an operation; general peritonitis and sepsis, nevertheless, do not disallow the operation. (5) One must, however, before deciding to operate, be certain that the intoxication is not derived from the perineum or vagina, that the case is not one of infection along the descending channels of the circulation, and that it is one in which the uterus is essentially concerned, and moreover, as far as can be ascertained, that the defensive glands (liver and kidneys especially) are intact. (6) Hysterectomy may be contra-indicated by collapse or extreme debility.

PINARD, Paris, approached the subject in quite a different way. Relying upon his own past experience, he discussed his subject in a broad, comprehensive outline, and referring to the proceedings of the Rome Congress, quoted the conclusions of the four reporters on the same theme on that occasion, Fehling, Leopold, Treub, and Tuffier, against the last of whom he directed his main attack, inasmuch as he asked the following questions: (1) How far am I and my fellow labourers unsuccessful in treating puerperal infection? In the last thirteen years, among 26,952 cases of labour and abortion, we have had sixty-nine deaths from septiciæmia (0.25 per cent.), and in two of these fatal cases hysterectomy had been performed. (2) In what cases of puerperal infection have any retrospective indications for hysterectomy been given by pathological anatomy, by bacteriology, or by clinical symptoms? In no single instance. No solitary abscess was ever met with confined within the walls of the uterus, nor any instance of gangrene so limited, nor has bacteriological examination of the

blood and contents of the uterus, though conducted by Roux, Vidal, and Marmorek, ever led us to suppose that hysterectomy would have been the proper treatment. His clinical experience was to the same effect ; and therefore he concluded, when the well marked, exceptional cases of placental retention, suppuration of a uterine fibroma, or injury to the uterus (laceration or inversion) are excluded, neither clinical experience, bacteriological or pathological anatomy can at present afford any indication for hysterectomy in acute puerperal infection, and consequently, that save in such exceptional cases, no indication of the kind exists.

CORTEJARENA, Madrid, treated the subject more from the practitioner's point of view. On the whole, he was not in favour of the operation, insisting particularly on two points : first, the difficulty of choosing the right moment for the operation, even when in principle one had resigned oneself to the proceeding, and secondly, that even if the woman gets well, she is debarred from future conception. As the modes of infection differed, the indications for its treatment did so also.

STRUMA PUERPERALIS.

MALADE, Treptow (*Berliner kl. Wchns.*, 1903, No. 18), points out that many published cases, especially by French observers, show that, in the course of labour, considerable enlargement of the thyroid gland may occur entirely independent of any epidemic influence. In many women there is during each pregnancy a development of the thyroid, which after labour undergoes involution. Though he has not met with any accounts of acute puerperal goitre he has had three cases of the kind under his own observation. In one, a case of placenta prævia, the woman died suddenly after version, and the death could only be attributed to the enlargement of the thyroid, which by compressing both carotids had caused an acute anæmia of the brain.

HYDRAMNIOS.

FELLNER, Vienna (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 296), shows from the anamnesis of labours in Schauta's Klinik in earlier years, and from those of 124 cases of hydramnios in the last four, that it is the rule in that con-

dition for the child to be abnormally big. Full term had been reached in 104 cases ; the average length of the children was 53.5 cm., and was the same even in primiparæ, while the average weight was 3518 grammes. In all cases the placenta was comparatively thick and large. This suggests that in all cases in which hydramnios is found together with an abnormally large child, the luxuriant growth of the villi is the cause of the excess of the amniotic fluid ; that while this luxuriant growth enlarges the organ it constricts the calibre of the placental vessels.

PARALYSIS OF THE UPPER EXTREMITY IN THE NEW-BORN.

EVERSMANN, Bonn (*Archiv f. Gyn.*, Bd. lxxviii., S. 143), reports : A secundipara of 26 years old, with a diagonal conjugate diameter of 10 cm., on account of prolapse of the cord was delivered, by version and extraction, of a living child. The right clavicle of the child was broken, and it suffered from paralysis of the muscles of the left shoulder and arm, supplied by the fifth and sixth cervical nerves : deltoid, teres minor, infraspinatus, biceps and brachialis internus. The child died two and a half months after its birth, and the ætiology of the paralysis was disclosed *post mortem*, by a laceration, healed by callus, of the nerves implicated, and evidently due to forcible lateral deflexion of the head upon the shoulder. There had been much difficulty in bringing down the left arm, and this was only effected during strong traction on the legs and forcing the child's trunk upwards and towards the opposite side.

HERMAPHRODISMUS VERUS.

SIMON (*Virchow's Archiv*, Bd. clxxii., Heft 1) reports the following case from the Koenigsberg Surgical Klinik : The individual was 23 years of age, the mammae were largely developed prematurely, but the mental attitude was decidedly masculine. Regularly at intervals of four weeks there was slight hæmorrhage for several days from the genitals, and these organs exhibited an amalgamation of the anatomical characteristics of both sexes. For some years, generally under sexual excitement, the object of which was invariably a female, and always with erection of the sexual member at the time, there had been discharge

of a whitish mucous fluid, which according to microscopical examination consisted of squamous epithelium and cell detritus. A body lying in front of the right inguinal canal was taken to be the germinal canal, and to clear up the case an incision was made, and microscopical examination of the specimen so obtained revealed both ovarian and testicular elements of tissue, well differentiated, though there might be doubt as to their functional capability. Moreover, the presence of tube, parovarium, vas deferens and epididymis was demonstrated. The illustrations of the microscopical conditions point to the case being actually one of true hermaphrodism.

NOTES.

WE have heard with regret of the death of one of the foundation Fellows of the British Gynæcological Society, Dr. JOSEPH GRIFFITHS SWAYNE, for many years the leading obstetrician in the West of England, who died at Clifton on August 1, in his 84th year. A native of Bristol, he studied there, and afterwards at Guy's Hospital and in Paris, and obtained the gold medal in Obstetric Medicine and Medicine and other honours at his examination for the M.B. of London in 1843.

In 1853 he became the first Physician Accoucheur to the Bristol General Hospital, an appointment he held till in 1875 he was made Consulting Obstetric Physician.

He was President of the Obstetric Section of the Meeting of the British Medical Association at Bristol in 1894, and served as President of the Bath and Bristol Branch of the Association and of the Bristol Medico-Chirurgical Society and as Vice-President of the London Obstetrical Society and also of the British Gynæcological Society. His principle work "Obstetric Aphorisms" has passed through ten editions, and been translated into many foreign languages, including Hindustani and Japanese. On his retirement in 1895 from the Chair of Midwifery in the Bristol Medical School, which he had occupied for fifty years, he was elected Emeritus Professor, and his friends, colleagues and pupils in the Medical School, to the value and reputation of which he had contributed so much, united in testifying their regard and esteem for his work and character at a banquet given in his honour.

We have also to regret the death, in his 68th year, of Dr. WILLIAM SMOULT PLAYFAIR, whose "Treatise on the Science and Art of Midwifery," now in its ninth edition, obtained for him from the profession in all countries the

same high reputation in which he was held at home. He died at St. Andrews, where he was born and first studied, afterwards proceeding to Edinburgh and taking his M.D. degree there in 1856. He served in India during the Mutiny, and for a time was Professor of Surgery at the Medical College of Calcutta. He was Physician Accoucheur to the Duchess of Edinburgh, and also attended the Duchess of Connaught and other Royalties. The Universities of St. Andrews and Edinburgh conferred on him their Honorary LL.D. He was Emeritus Professor of Obstetric Medicine at King's College, Consulting Physician for the Diseases of Women and Children to King's College Hospital, Consulting Physician to the General Lying-in Hospital and to the Evelina Hospital for Children. He served as Deputy Commissioner of Juries of the International Exhibition of 1862, and was a Grand Officer of the Crown of Roumania.

The deaths of the following Obstetricians and Gynæcologists also have been recently announced :—

Dr. GUGLIELMO DONZELLINI, of Florence, formerly Assistant to Professor Chiarleone and afterwards to Professor Calderini, and well known by his writings on "Premature Labour," on "Exaggerated Development of the Placenta, as a cause of its insertion in the lower segment of the uterus," on "Hyperemesis Gravidarum," &c.

Dr. DE LASKIE MILLER, formerly Professor of Obstetrics and Pædiatry at Rush Medical College, Chicago.

Dr. GORONWY OWEN, Professor of Obstetrics and Gynæcology at the Medical College of Alabama, Mobile.

Dr. Fernando Polo y Grijaldo, Professor of Obstetrics and Gynæcology in the University of Saragossa.

Dr. SEPTIMUS SUNDERLAND, Physician to the Royal Hospital for Women and Children, has been appointed Obstetric Physician to the French Hospital, Shaftesbury Avenue.

GEHEIMRAT Professor Dr. WERTH, of Kiel, has been chosen as President of the Congress of German Gynæcologists, to be held in that city in 1905.

Dr. P. T. VAN DER HOEVEN, of Amsterdam, has been appointed to the Chair of Obstetrics and Gynæcology in the University of Leyden, vacated by Professor J. Veit, now of Erlangen.

Privatdozent Dr. PAUL MICHIN, of Dorpat, has been appointed Professor of Obstetrics and Gynæcology at the University of Charcow.

Dr. HEITZ having at his own request been given the Chair of Surgery and External Pathology, Dr. BAIGUE has been appointed Professor of Clinical Obstetrics at Besançon.

Dr. HUGO EHRENFEST, formerly an operator at Schauta's Klinik in Vienna, has been appointed Instructor in Obstetrics in the Medical Faculty of the University of St. Louis, Missouri, U.S.A.

Dr. WALTHER STOECKEL, Medical Superintendent of the Klinik and Polyklinik for Midwifery and the Diseases of Women at the University of Bonn, will leave on October 1 next to undertake the work of Privatdozent of Obstetrics and Gynæcology at Erlangen.

Dr. ADOLF GLOCKNER, Senior Assistant at the University Frauenklinik at Leipsic has qualified as Privatdozent of Obstetrics and Gynæcology; his dissertation was "On Solid Ovarian Tumours," his test lecture "On the Pathology and Treatment [of Diffuse Peritonitis after Childbirth or Operation."

THE COLLECTIVE INVESTIGATION OF PUERPERAL ECLAMPSIA.

This investigation, under the auspices of the Clinical Society of Manchester, is proceeding, and a considerable number of reports have been received, but no attempt at analysis has yet been made by the Committee. Dr. J. Price Williams, the Honorary Secretary for the investigation, Broomfield, Swinton, Manchester, will be very happy to supply forms for reports to any member of the profession who will ask for them. His personal impression, which he is careful to mention has not any authority from the Investigation Committee, is that the hypodermic injection of morphia has frequently been followed by remarkable improvement, and that the induction of labour, when it has not set in, is not, as a rule, advisable.

The matter was brought before the Fellows of the British Gynæcological Society at their meeting last March, but in view of its importance and the desirability that the investigation should be as comprehensive as possible we reproduce the letter then alluded to.

“COLLECTIVE INVESTIGATION OF PUERPERAL ECLAMPSIA.

“To the Editor of *The Medical Press and Circular*.

“SIR,—The request of the Clinical Society of Manchester for reports of cases of eclampsia is meeting with a hearty response from medical men all over the country. The committee would like to point out that a diminution in the excretion of urea is coming to be regarded as an important physical sign of the pre-eclamptic state, more important, perhaps, than albuminuria.

“The vital point is one on which they hope their investigation will throw much light, and reports which give quantitative estimations of urea, and daily quantity of urine, will be doubly valuable for this reason.

“The use of the hypobromite process with Southall's Ureometer is very simple, and the apparatus is in-

expensive (it can be obtained through any chemist for about 3s). It may perhaps be hoped that those who are favouring us with reports of cases will find time to furnish data, enabling us to correlate the out-put of urea with the gravity of the case.

“ We are, dear Sir,

“ Yours faithfully,

“ T. ARTHUR HELME, President.

“ J. PRICE WILLIAMS, Swinton, Manchester,
Hon. Secretary for the Investigation.

“ J. HOWSON RAY,
Hon. Secretary Clinical Society.

“ 22, *St. John Street, Manchester,*
March 4, 1903.”

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
NOVEMBER, 1903.

THE RELATIONS OF FUNCTIONAL NERVOUS DISEASES TO
THE FEMALE GENITAL ORGANS IN REGARD TO THEIR
ETIOLOGY, DIAGNOSIS AND TREATMENT.

KROENIG, Jena (*Muenchener m. Wchns.*, No. 40, S. 1749, 1903), the first reporter upon this subject at the Seventy-fifth Congress of German Naturalists and Physicians, said : " Diseases of the genital organs, especially such as are accompanied by severe loss of blood or prolonged inflammation of the adnexa, *e.g.*, gonorrhœal pelvic peritonitis, may be the direct cause of profound exhaustion of the nervous system and so of neurasthenia, and even the physiological function of the generative organs, repeated pregnancy and labour, may be a predisposing factor in the occurrence of neurasthenia. There can hardly be any agreement in opinions as to the influence the physiological functions and pathological conditions of the organs of generation may exert upon the occurrence of hysteria as long as the ideas of authors as to what is meant by that term are so very different. Even in the narrower acceptance of hysteria as a psychosis it must be admitted that clinical observation shows that diseases of the genitalia often cause hysteria to become manifest in cases in which previously it has been entirely latent. The physiological course of the functions of these organs acts in the same way as at the beginning of puberty, during menstruation, childbirth, and the climacterium.

The idea that in women deficient sexual intercourse has an unfavourable influence on the nervous system and becomes the source of hysterical or neurasthenic trouble may be entirely rejected. Sexual abuses, such as masturbation and the prevention of conception, contribute far

less frequently in women than in men to hysterical or neurasthenic conditions.

In hysteria and neurasthenia the morbid symptoms frequently affect the genital system with special intensity and persistence, so that in individual cases there is often great diagnostic difficulty in deciding whether these symptoms are to be considered as forming part of the syndromata of the nervous affection, or are due to some local genital disorder. Considering how commonly hysterical and neurasthenic troubles are met with, and on the other hand the frequency with which, owing to the improved methods of gynæcological diagnosis, we are able to point to variations from the normal in the genital organs, it is not wonderful that a causal relation between a genital anomaly and the morbid phenomena is often erroneously supposed while the coincidence of the symptoms is purely accidental. Owing to such mistakes the clinical importance of many an anomaly in the genitals is often overestimated. This appears most clearly in the significance that has been ascribed, for instance, to Emmet's lacerations, to such a displacement as mobile retroflexion of the womb, to endometritis, and even lately perhaps to parametritis posterior, &c., inasmuch as such affections have been mistakenly held responsible for all sorts of nervous troubles local or even remote from the genitalia, and have been accepted as the direct causes of hysteria.

Many morbid phenomena, which it was formerly thought necessary to refer to definite lesions of the genitalia, are now accepted as in most cases secondary effects of existing hysteria or neurasthenia; so, for instance, dysmenorrhœa, hyperemesis gravidarum, and the vasomotor and trophic troubles associated with the onset of the menopause.

Dysmenorrhœa no doubt is often due to some pathological change in the genitals, to stenosis of the os, for example, to gonorrhœal metritis and endometritis, or endometritis membranacea, &c., but it is for the most part met with in anæmic neuropathic persons in whom no pathological lesion of the genitalia can be discovered.

Though hyperemesis gravidarum must in the majority of cases be accepted as an hysterical symptom, we have as yet no explanation why, as part of the syndromata of hysteria and neurasthenia, it should be during pregnancy that it so frequently is met with.

The nervous phenomena commonly associated with the menopause, the vasomotor and trophic troubles, palpitations, obesity, perverted sensations, hypochondriac depression, terrors, &c., affect neuropathic individuals with peculiar severity. The idea that climacteric neuroses appear as frequently in women who have been previously healthy as they do in those who have been neurotic, and that therefore such neuroses are independent of the former condition of the nervous system, does not accord with clinical experience.

In regard to treatment, it must be remembered that neither neurasthenia nor hysteria is any bar to the local treatment of co-existent genital disease. Indeed, under certain circumstances hysteria or neurasthenia may give indications for local intervention with the genitals in cases which, with a normal healthy nervous system, one would otherwise treat expectantly. For instance, in case of a nervous hysterical woman one would recommend the removal of a myoma which caused menorrhagia all the sooner, because long persistent bleeding has a particularly deleterious effect upon the nervous and hysterical condition.

In general, however, in the presence of hysteria and neurasthenia, local therapeutical measures upon the genitalia should be avoided. The assertion that compared to operations upon other organs, conservative operations on the genitalia cause an especially severe psychic shock which may be a direct cause of hysteria or neurasthenia, may be absolutely denied. The fact that the clinical significance of many genital anomalies, especially of Emmet's lacerations and of displacements of the womb, was overestimated formerly, makes it our duty, in all cases in which such anomalies are associated with local or general nervous symptoms, to ascertain, as far as possible in every individual case, what causal relationship may be in action, before attempting any local treatment. The knowledge that neurasthenic and hysterical troubles are apt to be localised in the genital system will diminish the number of operations for the relief of various genital anomalies. Certainly no operations for the removal of an old tear in the cervix (Emmet's laceration), or of a displacement of the uterus should ever be undertaken until continued observation has shown that the existing troubles are to be attri-

buted to the anomaly in the genital organ. The induction of abortion has to be considered in certain severe forms of hysteria and serious neurasthenic conditions when all antinervous treatment is of no avail. An operation for the induction of sterility should not be performed except on a woman, near her climacteric, in whom profound exhaustion of the nervous system has been brought about by a number of rapidly succeeding labours."

EULENBURG, the second reporter on the subject, was prevented by illness from being present, but his printed conclusions were before the meeting. He desired that a sharper distinction than hitherto should be drawn between neurasthenia and hysteria; both were generally dependent upon congenital, and sometimes inherited, developmental defects in the central nervous system. He questioned whether any diseases arising under the local influence of the generative organs of women could in themselves, either directly or through reflex action, cause those neuroses, and on the other hand admitted that pathological conditions of the female genitalia played a great part in eliciting secondary functional diseases of the nervous system. As chief symptoms of neurasthenia he set down abnormal irritability and excessive states of exhaustion, whether physical or psychical; but contended that in regard to hysteria no single group of symptoms could be accepted as pathognomonic, as an hysterical stigma. Hysteria was a psychosis that could only be recognised by observation of the frequent and often sudden changes in the form of the disease, the want of connection between even the most severe functional disorders and any corresponding local alterations, the incoherence and spontaneity of the grouping of the symptoms, and more than all, by the study of the hysterical character with its morbid susceptibility to suggestion, its changeability and feebleness of will. There was, he held, a sexual neurasthenia and sexual hysteria in women, analogous to the sexual neurasthenia in man, but while the latter is characterised by disordered sensations and discharges in the genital system, in women we have to contend with morbid vicissitudes of consciousness and the secondary manifestations depending thereon, that is to say, with unhealthy phenomena psychically begotten and manifested in psychical ways.

CONSERVATIVE SURGERY OF THE FEMALE PELVIC ORGANS.

NORRIS (*Amer. Journ. Obst.*, October, 1903) refers to the fact that gynæcologists have been much criticised for recklessly removing pelvic organs showing no marked evidence of disease, and points out that in recent years earnest efforts have been and are being made to overcome this recklessness. The mental, physical and moral disadvantages of the artificially induced menopause have in many cases been so unfortunate that efforts to preserve for a woman her special functions are but a natural sequence of the surgical progress of the past decade.

The advantages of conservative surgery are: First, the possible preservation of the power of procreation, even in organs seriously damaged by disease; secondly, the retention for women of their menstrual function is an important reason for preserving an ovary or even a portion of one. The function of the ovary is no longer thought to be solely procreative. Women who have been deprived of their ovaries very often manifest most unfortunate nervous symptoms. Irritability, nervous depression, morbid states of mind, hysterical and neurasthenic symptoms are common.

In suppurative diseases of the appendages the risk to health, and even to life, is so great that such cases should very seldom be submitted to that risk. Sometimes an ovary, otherwise healthy, is adherent to the wall of a par-ovarian cyst and can be removed from the cyst wall and left to continue its functions. In prolapse of the ovary, stitching it at a proper level to the posterior surface of the broad ligament, or elevating it by shortening the infundibulo-pelvic fold of the broad ligament, may relieve the distressing symptoms without sacrificing the ovary. Some of the failures to relieve pain following ventro-suspension and Alexander's operation are due to a prolapsed ovary which those operations have not corrected. The evacuation of the blood clot by vaginal section in extrauterine pregnancy, and nature's ultimate repair of the affected tube and ovary as evidenced by subsequent pregnancy, is conservatism which can only be adopted when the hæmatoma is one of relatively long duration. The removal of

submucous or subperitoneal uterine fibroids by myomectomy rather than by hysterectomy is the legitimate conservative method of treating such growths. Most important are chronic cases of hydro- and hæmato-salpinx, ovarian hæmatomata, and single or multiple cysts of the ovary with various degrees of visceral adhesions. These affections may be bilateral and slight, or as commonly occurs in conservative work, while one side is irreparably diseased and must be removed, the other offers possible success for conservative measures. Associated with chronic pelvic inflammations, structural changes in the appendix are so frequently found that it is true conservative surgery to remove the appendix whenever the abdomen is opened for any cause. Norris admits that the total results in his series of cases have been somewhat discouraging and sometimes difficult to understand; that in some instances where the original lesion treated by conservative methods was unilateral and not extensive, and therefore brilliant results were anticipated, the disease progressed rapidly and a secondary operation has been required; on the other hand, that in others, when his own enthusiasm or the patient's expressed desire had perhaps made him carry conservative efforts to an extreme, the most fortunate results have followed. Future fertility depends more upon the condition of the tube and upon successfully restoring its calibre and integrity than upon plastic work upon the ovary, which seldom even relieves pain. In doubtful cases the age of a patient will often help to a decision. In neurasthenic and hysterical women the preservation of the menstrual function is more beneficial than its destruction.

J. F. J.

CONSERVATIVE GYNÆCOLOGY.

LAPTHORN SMITH, Montreal (*American Medicine*, 1903, September 12) in a paper read to the Canadian Medical Association at their Thirty-sixth Annual Meeting at London, Ontario, last August, said that in many cases what was called "conservative gynæcology" should rather be termed incomplete work; and that in no department of surgery was it more necessary to be thorough than in gynæcology. He has seen so many disappointing results in his own and in other's hands, from trying to make half an opera-

tion do when the condition present called for a whole one, that he felt less and less inclined to risk the success of the operation and his own reputation by doing anything less than was necessary. In about a dozen cases he had been obliged to open the abdomen a second time to remove the other ovary which had appeared healthy at the first operation. After having treated a patient for at least a year by every possible local and general means without relief, if her condition warrants an operation at all, he endeavours to obtain her consent to his doing what he thinks best for the complete success of the operation. If both ovaries are cystic or sclerotic he removes both. In about twenty cases he has left a small piece of the better ovary and one tube in order to keep up menstruation, and these cases so far have been satisfactory. Two or three have since become pregnant and several others have menstruated. In one case he adopted the suggestion of Dr. Howitt of Guelph, which was to scarify the thickened cortex of the ovary through to the stroma, when the tension is immediately relieved, and the incisions become open spaces. Although the space is filled up with exudation which eventually becomes scar tissue, it never compresses the ovarian nerve tissue so much as the sclerosed capsule of the ovary. He also thought there was a future for Dr. Robert Morris's suggestion to introduce a piece of healthy ovary into a slit in the back of the broad ligament and hold it there with a stitch. (Dr. Morris finds that every one of the cases on which he has tried this ovarian grafting has menstruated and one has become pregnant.) He was not in favour of ignipuncture on account of the cicatrix which always followed burns, and which was especially dangerous when situated in tissue rich in nerves. He had saved diseased tubes and repaired torn ones, and even left in the half of a tube after opening it up; but none of the cases turned out satisfactorily, and two died from infection of the peritoneum. He was in favour of leaving the uterus even when both tubes and ovaries had to be removed, because it helped to keep the arch of the pelvis supported and also was useful in suspending the fallen vagina and bladder. As he had often observed, this latter condition, after operations for the removal of large pus tubes leaving a large space into which the uterus dropped,

it was his custom, after removing the tubal abscesses, to perform ventrofixation in nearly every case. In vaginal hysterectomy he left the ovaries and tubes except when the uterus was the seat of advanced cancer. When a patient had many diseased conditions which could not be cured except surgically, he endeavoured to perform all the necessary operations at one sitting. With good nurses and well-trained assistants he had many times done dilatation, curetting, repair of the cervix, anterior and posterior colporrhaphy, removal of both ovaries and tubes, ventrofixation and removal of the vermiform appendix in an hour and twenty minutes. By tying all arteries before cutting them and the use of hæmostats, not more than four ounces of blood need be lost, nor more than four ounces of A. C. E. mixture need be used.

VAGINAL INJECTIONS IN OBSTETRICS AND GYNÆCOLOGY AND AS A HYGIENIC PROCEDURE.

LUCAS-CHAMPONIÈRE (*Presse Méd.*, 1903, No. 42) discussing the excessive use of vaginal injections, points out that the septic character of ordinary fluor albus is far too readily assumed, the "whites" being generally due merely to a congested condition of the uterus, which is what makes them so common, before and after the catamenia, and disappear with the cause of the congestion. Congestion is also the chief cause of leucorrhœa during gestation, and of course is not remedied by injections. After delivery lacerations of the cervix or injuries of the kind may have to be dealt with; if so he deems it best to employ for cleaning such wounds a small quantity only of some efficient antiseptic, and he invariably uses a strong solution of carbolic acid (acid. carbol. concentr., glycerin aa 50, aquæ 1,000). In gynæcological practice injections, so far from being innocent, offer opportunities for the introduction of septic matter into the internal genitalia; moreover the action of the drugs selected may be not merely of no use, but even be absolutely harmful. He has met with numerous cases in which patients have been cured of their complaints, often of a very serious character, simply by interdicting the injections prescribed for them. Injections ordered entirely from a hygienic point of view should, he

thinks, be altogether abandoned, as he looks upon them as the commonest cause of sterility, and so of the decreasing population of France; the simplest and apparently most harmless injection is a serious impediment to impregnation, and even should conception have taken place will frequently lead to early abortion. Injections should never be prescribed except for their therapeutical effect upon a morbid condition actually present. When the whites become very profuse and malodorous, he finds simple alkaline injections much better than any antiseptic, for they neutralise the discharge from the vaginal mucosa which is often very acid, and rather encourage than impede fertilisation. Boiled water containing 1 per cent. of bicarbonate or even carbonate of soda is effective. If the vaginal mucosa is red and swollen, a mild astringent may be employed, such as a decoction of canella, oak bark or oak leaves, alone or with borax (tannin 3, borax 10, water 1,000), and such astringents are generally much more effective than weak antiseptics such as 1 to 2 per cent. permanganate of potash; mercurial salts, the sublimate especially, he rejects altogether. The temperature of the injections is of great importance—it should be exactly that of the body; irrigation with over-hot fluids he has found cause severe attacks of pain, and in many women evil after effects.

Briefly, Lucas-Champonière holds that much more care must be bestowed on the force, temperature, frequency of repetition of these injections and on the drugs employed, than is generally taken at present. In true septic affections of the uterus the medical man should interfere at once; injections merely lead away from the appropriate method of treatment, and taking its place delay or oppose what should effect a cure.

VULVO-VAGINITIS IN CHILDREN.

DOOKELSKI (*Vratch*, 1903, April 19) describes vulvo-vaginitis as (1) infectious, either (*a*) specific or gonorrhœal, (*b*) diplococcic, or (*c*) simple; and (2) non-infectious, *i.e.*, catarrhal. From his personal investigations he draws the following conclusions: (1) The disease of children commonly described as “whites,” “fluor albus,” “leucorrhœa,” and otherwise, is, in 80 per cent. of the cases, infectious vulvo-vaginitis of a specific gonorrhœal nature.

In the remaining 20 per cent. the infection is of the diplococcic or simple forms which, as compared with the extreme persistence of the gonorrhœal form, are marked by their quick course and speedy recovery. Non-infectious vulvo-vaginitis is only met with in the catarrhal form and is always of a very protracted nature. (2) The general constitution of children has no distinct influence on the course of vulvo-vaginitis. (3) In the majority of cases the infection of the children is by the mothers. (4) Cases of infection by rape and by immediate contact recover with extreme tediousness, sometimes with high temperatures and acute complications. (5) There is a possibility of the infection of vulvo-vaginitis by the mother at the time of birth. (6) Inflammation of Bartholin's glands is met with in the acute forms in gonorrhœal vulvo-vaginitis. (7) When there is inflammation of Bartholin's glands it is only possible to distinguish the forms of infection by microscopical examination. (8) The gonorrhœal forms of vulvo-vaginitis in children require further investigation as to their sequelæ. (9) It is necessary to diffuse the knowledge that whites are infectious and dangerous, and to enlighten the masses so that the foundations of treatment may be hygienic and preventive against vulvo-vaginitis.

F. E.

PROLIFERATING PAPILLARY CYSTOMA OF THE LABIUM MINUS.

POLITI (*Archivio di Ostet. e Ginecol.*, 1903, April), in view of the rarity of this condition, publishes this case with illustrations. The tumour was in the right labium minus and consisted of two portions, one as big as a bean and the other much smaller. The patient was operated upon for prolapse, and these nodules which had not caused any great trouble, were shelled out at the operation. The specimens were hardened and stained by Van Giesen's method. The larger tumour was a simple cyst with well defined walls containing many cubical cells arising from the epithelial proliferation of the internal surface of the wall. The smaller tumour was formed of a multitude of very small cysts, formed by connective tissue partitions springing from the wall of the mother cyst; that is to say, exhibiting the structure of a proliferating papillary cyst.

The author says that this is the early stage, and the larger cyst resulted from the breaking down of similar small cysts. He considers these cysts to be new formations in which the connective tissue is at first active, and then yields to the activity of the epithelial cells. They are not retention cysts nor aberrant patches of germ epithelium. What part the ducts of Gaertner may have in their formation he does not know. They would probably have grown rapidly if left.

F. E.

THE ETIOLOGY OF KRAUROSIS VULVÆ.

JUNG (*Muenchener m. Wchns.*, 1903, No. 40, S. 1752), speaking at the recent Congress of German Naturalists and Physicians, said that the etiology of kraurosis was still an unsettled question upon which every writer seemed to have a different opinion. Breisky recognised as kraurosis merely that shrivelled condition in which the vulva is ultimately found; later investigations have shown that this condition is always preceded by inflammation. Bacteriological research has given us no information, and the same may be said of examination of the nervous system. Veit refers the kraurosis to antecedent pruritus, but in chronic inflammations of the vulva, in which there can be no supposition of a kraurosis proper, we meet with identical changes in the skin, the same changes and disappearance of the elastic fibres, ecstacy of the veins, small-celled infiltration of the chorion and atrophy of the papillæ. It must therefore be admitted that the chronic inflammatory process is the cause, and the kraurosis merely the final result; that kraurosis is not a particular type of disease but may be the consequence of gonorrhœa, pruritus, tuberculosis, carcinoma, or any other affection which leads to chronic inflammatory processes in the skin about the vulva.

CARCINOMA VULVÆ.

PETERSON (*Amer. Jour. Obst.*, 1903, June) reports four cases of carcinoma of the vulva. The youngest patient was 43, the oldest 84. In three the growth was a little below the clitoris on one side, involving the clitoris itself in one; in the fourth it began in the left labium majus, and extended crescent-wise over the perineum to the right labium. Even after wide operation the prognosis is very

unfavourable. SCHAEFFER (*Zentralb. f. Gyn.*, 1903, No. 31) reports two cases of cancer of the labia in old women, also one of primary cancer of Bartholin's gland, fatal from advanced recurrence three years after operation (*British Medical Journal*, Epitome, 49 and 149).

CARCINOMA VAGINÆ.

MALY, Reichenberg (*Zentralb. f. Gyn.*, 1903, No. 27), found a large carcinoma of the vagina in a woman aged 67. For thirty-nine years she had worn a ring pessary which, at intervals of several months, she used herself to remove and clean. The cancer had a furrow corresponding exactly to the ring; palliative treatment only. He has found that six analogous cases have been published.

MENSTRUATIO PRÆCOX.

WISCHMANN (*Norsk Maga. f. Laeg.*, 1903, April) reports: Hæmorrhage appeared on February 24, 1901, in a child born September 4, 1899, and during the following sixteen months menstruation took place twelve times. The child physically was powerfully developed; her nipples were large with palpable glandular substance; there was hair on her mons veneris and in her armpits. She was not rickety, and no similar abnormality had been seen in the family. As in former cases of the kind ovarian sarcoma had been found, Wischmann was dubious as to the prognosis. He points out that the parents should be informed that sexual impulse in such cases is sometimes very strong.

THE MEDICAL TREATMENT OF DYSMENORRHŒA.

HAMMOND, Philadelphia (*Amer. Med.*, 1903, August 29), in the course of an article on the subject, says: The treatment of dysmenorrhœa may be divided into (1) the prevention of the attack, (2) the treatment of the attack, and (3) the treatment between attacks.

(1) *The Prevention of the Attack*.—In cases depending upon congestion of the pelvic viscera, pain can be frequently prevented by free saline purgation the day of, or the day previous to, the appearance of the flow, especially when obstinate constipation is present.

Tincture of gelsemium is indicated in patients in whom a physical pelvic examination fails to find a

demonstrable pathologic lesion ; 10 drops of the tincture should be taken three times daily, begun each month seven to ten days previous to the beginning of the flow. In a large proportion this plan of treatment will afford absolute or marked relief.

(2) *The Treatment of the Attack.*—All cases are benefited by rest during the period, in bed if necessary. Hot vaginal or rectal douches, and a hot water bag over the abdomen afford a certain degree of relief.

The fixed violent boring pains due to small intramural myomas may be controlled by suppositories, belladonna, hyoscyamin or antipyrin.

When the pain is of a neuralgic character, phenacetin antipyrin, gelsemium, cannabis indica, the bromides, caffeine, sodium benzoate, and viburnum prunifolium alone or in suitable combinations are indicated. Diaphoresis should be encouraged.

In congestive dysmenorrhœa, with or without malposition of the uterus, and in all conditions that occasion a hyperæmia of the uterus and its ligaments, warm clothing, especially over the abdomen, and hot sitz-baths, free purgation with salines, and local depletion of the blood-vessels by copious hot vaginal douches in the recumbent posture, should be ordered. The medicinal treatment is the same as for the neuralgic and as detailed below. The treatment of an inflammatory attack is the same as for the congestive variety.

Antipyrin is preferable to the other coal-tar products, such as acetanilid, because it does not produce the changes in the blood that follow the administration of acetanilid. Harrison claims wonderful results from antipyrin administered hypodermically, in very severe cases using as much as 15 grains at a dose, which is not to be repeated.

Opium should be employed only as a *dernier ressort*. Its routine treatment, frequently in the form of chlorodyne, must be severely condemned. Alcohol is frequently of marked value, but is to be used with discretion, as a series of cases of chronic alcoholism have been reported, due to the routine administration of whisky for dysmenorrhœa.

Large hot flaxseed poultices, sprinkled with a dessert-spoonful of laudanum, may be applied to the abdomen

every two hours. A liniment composed of the fluid extracts of belladonna and hyoscyamus, of each 1 dram, and camphor liniment to 3 ounces, applied to the abdomen frequently affords relief. An enema of 2 drams of the infusion of valerian to 1 pint of water may prove of value. If the flow is scanty, hot sitz-baths to which mustard has been added are useful.

In dysmenorrhœa due to a vasomotor spasm, nitroglycerine, gr. $\frac{1}{60}$, repeated in an hour if necessary, will usually afford immediate relief, but this drug is useless if employed otherwise than here indicated.

Five years ago Fliess published a monograph on the connection between nasal and menstrual conditions, the main thesis in which was that in the nose there are two "genital spots," one the tuberculum septi and the other on the inferior turbinated, which in many women show congestion and sensitiveness during menstruation. In some cases of severe dysmenorrhœa Fliess was able to control the pain by applications of cocaine to these "spots," and more rarely to permanently cure the menstrual difficulty by cauterisation of the same region. The idea of relationship between the upper respiratory tract and the genital organs in women is much older than the contribution by Fliess, but since its publication the subject has been reported on by a number of physicians, all of whom seem to find a certain percentage of cases amenable to this treatment. Schiff found cocaine effective in 35 out of 41 cases, and concluded that it was of service whenever the pain persisted after the flow was well established. Koblanck, Ruge, Knorr and Krönig have all reported series of cases favourably affected. More lately Ephraim has been successful in arresting the pain of intense dysmenorrhœa in 18 out of 24 cases treated by cocaine. In Amann's clinic Linder experimented during the past two years on a series of 30 cases. The relief was so marked that some patients have returned to have other painful disorders treated.

The influence of suggestion in rendering this treatment effective has proved a difficult question to decide. Schiff undertook to rule out this factor and found that applications of water were ineffective. Linder reports a

special series of 16 cases, selected with great care in order to test this point more exactly. In 10 the cocaine caused cessation of pain, sometimes lasting twenty-four hours. When the pain had returned Linder tried a second application, this time secretly substituting plain water for the cocaine solution. Two of the 10 were again favourably affected. Repetition of the cocaine treatment then proved effective in all cases. Linder is convinced that in some instances suggestion is the strongest factor in the result, although it must be remembered that even water causes physiologic effect on the nasal mucous membrane. The striking number of cases which are relieved by nasal therapy, which, whether it involves suggestion or not, is in itself harmless, ought to make the method equally welcome to physician and patient. The cocaine is applied on a pledget of cotton through a speculum, using two or three drops of a 10 per cent. to 20 per cent. solution, and is carefully limited to the "genital spots," so that there is no danger of intoxication. To be effective it may have to be repeated in fifteen minutes. Cauterisation seems to cure far fewer cases than cocaine relieves.

When the ordinary methods employed to relieve dysmenorrhœa prove unavailing, when a careful physical examination shows a normal condition of the pelvic viscera, and the pain is localised in the right lower quadrant of the abdomen, one must bear in mind the probability of an appendiceal condition, not a true appendicitis, but an appendiceal colic, caused no doubt by the pelvic congestion accompanying menstruation. Such patients are relieved only by removing the vermiform appendix. McLaren reports four cases illustrative of this condition, and concludes that when it is necessary to prescribe morphine regularly, and local treatment proves useless, especially in a patient who has already been operated upon without relief, an exploratory abdominal section is justifiable. Several years ago I assisted Dr. Wilmer Krusen in an operation upon a married woman in whom this menstrual appendiceal colic was the prevailing symptom, and she was cured by the removal of the vermiform appendix.

(3) *Treatment between the Attacks.*—The general health

should be promoted by tonics, proper exercise, baths, suitably adjusted clothing, and attention to the bowels. When there is a lack of tone in the uterine muscles strychnine or tincture of hydrastis may be given in the free interval. Pelvic congestion should be depleted by local treatment.

Lycette, of Wolverhampton, considers that, in the absence of local cause, it is important to investigate the past and family history of the patient. In the rheumatic diathesis he has found the administration of black cohosh and allied remedies advantageous.

Intrauterine medication is not to be recommended, excepting for membranous dysmenorrhœa.

When there is a demonstrable pelvic lesion, medical treatment is only palliative; surgical measures are necessary to effect a cure.

THE DIAGNOSTIC IMPORTANCE OF THE SACRO-UTERINE LIGAMENTS.

SELLHEIM, Freiburg (*Muenchener m. Wchns.*, 1903, No. 28), in a communication to the Wuerzburg Congress, recommended systematic palpation of the sacro-uterine ligaments as a means of accurate anatomical diagnosis, and as a desirable proceeding in every exact gynæcological examination. Among its many advantages, he insisted most upon its being the best means at our disposal to distinguish swellings in the parametrium from those in the peritoneal cavity; tumours developing within the ligaments from those growing freely into the abdominal cavity.

RETRODEVIATIONS OF THE UTERUS.

STONER (*Amer. Journ. Obst.*, October, 1903) believes that Alexander's operation should only be undertaken after disease of the appendages and uterine and periuterine adhesions have been excluded, and that if this cannot be done the abdomen must be opened, and either the round ligaments shortened or the uterus suspended. Neither of these operations wholly corrects the pathological conditions accompanying retroversion. The cervix is left unsupported by the elongation of the utero-sacral ligaments, which must therefore be shortened also. After doing whatever is necessary for the appendages, the uterus is

held forward to bring the utero-sacral ligaments into prominence, and each of them is then transfixed, two inches from its attachment to the uterus, with a needle carrying a moderately fine silk ligature. Midway between these sutures and the uterus, the ligaments are again pierced with sutures. Traction is then made so that the first or higher suture can be drawn down towards its uterine attachment, and the ligament is anchored close to the origin from the uterus. The lower suture is drawn up towards the sacro-iliac junction and is attached to its fellow. The ligament is thus folded upon itself and the folds are then fastened together with fine catgut. This operation is productive of no danger of intestinal obstruction or interference with pregnancy.

J. F. J.

THE ALEXANDER OPERATION FOR RETROFLEXION, AFTER APPENDICITIS.

NEUGEBAUER, Ostrau (*Zentralb. f. Gyn.*, 1903, No. 27) describes five cases of mobile retroversio-flexio uteri, which in spite of precedent appendicitis were cured by the Alexander-Adams operation, as proving that such appendicitis is not a contra-indication to that operation.

NEW GROWTHS OF THE ROUND LIGAMENT.

NEBESKY, Innsbruck (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 441), describes three tumours of the round ligament: a fibromyoma lymphangiectodes, arising from the extra-pelvic part of the ligament, a fibromyoma of the left ligament, and a hydrocele muliebris which had developed from the right round ligament. In connection with these cases he has arranged in a convenient tabular form all the tumours of the kind described up to the present, giving special prominence to such as have contained epithelial elements.

THE ROUND LIGAMENT IN HERNIOTOMY.

KAYSER, Berlin (*Archiv. f. Gyn.*, Bd. lxi., S. 431), noting that in four instances the first symptoms of retroflexion of the uterus appeared after radical operations for hernia, opines that some injury to the round ligament during the operation may have led to the subsequent displacement; he therefore recommends that whenever a

woman is operated on for inguinal hernia the round ligament should be isolated and, without any shortening, be made fast to the inguinal ring.

GOLDNER, Vienna (*Zentralb. f. Gyn.*, 1903, No. 31), denies Kayser's assumption on the basis of fifty Bassini operations. In six instances the round ligament was divided on one side, in three upon both; none of these patients complained of any trouble, nor when subsequently examined showed any sign of lateral or backward displacement.

THE SURGICAL CURE OF GENITAL PROLAPSE.

NICOLA DE PACE (*Archivio di Ostetricia e Ginecologia*, 1903, May) concludes, as many others have done, that removal of pieces of mucous membrane will not cure what, practically, constitutes hernia of the parts. Real cure is only to be obtained, as in the case of hernia of the parietes, by suture of the supporting fasciæ.

Taking cystocele first, he points out that unless the supports of the bladder by the anterior portion of the pelvic fascia be re-established, the plastic attachment is bound to yield very quickly. The cystocele is due to the giving way of the vesico-cervico-vaginal interspace—a space left in the middle line free of supporting fascia—and the hernia of the bladder must be cured first. This is to be effected by a median incision into this loose cellular space and blunt dissection, until the firm pelvic fascial tissue marked by the presence of the vesico-vaginal venous plexus, is reached on each side, the firm aponeurosis is stitched together in the median line, thus at once forcing the bladder up. The mucous membrane is then sutured after excision of the surplus.

In a case of complete prolapse of the uterus with relaxed vagina and hypertrophic elongation of the cervix, the operation is performed in three stages: (1) Anterior colporrhaphy with amputation of the anterior cervical lip and vaginal hysteropexy; (2) amputation of the posterior lip and posterior colporrhaphy with elevation of the pouch of Douglas; (3) restitution of the perinæal floor, especially by going deeply in at the sides and bringing the musculo-aponeurotic layers together across the middle line so as to separate the vaginal and rectal tubes widely.

This constitutes Pestalozza's method, and as it leaves the sexual functions unimpaired and restores the parts to their normal positions without removal or damage of anything essential, it deserves extensive trial. The author has seen this method carried out with great success, and has operated himself with permanently good results.

The good effects of raising the pouch of Douglas by suture of the posterior vaginal wall higher up on to the uterine wall after amputation of the posterior lip, are specially noted as placing the utero-sacral ligaments on the stretch and restoring their normal functions.

F. E.

OPERATIONS FOR PROLAPSE.

J. VEIT (*Muenchener m. Wchns.*, 1903, No. 28, S. 1233), speaking at the District Medical Society at Erlangen, remarked upon the difficulties that such discussions as the late one at Wuerzburg gave to practitioners. They were told of very different methods of operating, and of the great number of relapses, and it was therefore not surprising that many medical men became very sceptical as to the permanent results of operations for prolapse. He deprecated such pessimistic views. Even in regard to ultimate results the certainty now reached by operation was very great, always provided that interference was not delayed, and that the prospects of success had not been greatly diminished by the indiscriminate use of pessaries of excessive size. On the course to be adopted in those doubtful cases in which, after large pessaries had been worn for years, no instrument was effectual, and in which the prolapse, now covered with ulcerations, had been extruded from the body, very opposite views were held, and though in such cases he still always attempted a plastic operation, he no longer depreciated the value, under exceptional circumstances, of the radical treatment, the extirpation from below of the whole of the vagina and the uterus, in the way proposed by August Martin.

Veit had formerly been disinclined to such interference owing to the repulsion he felt for the mutilation it involved. But two cases in which, on account of the prolapse being complicated with carcinoma of the vagina, he had been compelled to resort to this radical method, convinced him

of its value. It was absolutely surprising how, after the extirpation of the vagina and uterus, the remainder of the prolapse retired, a result he could only explain as being due to the contraction of the levator ani; to similar muscular action he attributed the fact that vaginal hernia seldom occurred after vaginal extirpation of the uterus. He exhibited a patient (a chronic alcoholic), in whom this radical operation had been performed with good effect, without narcotics or even local anæsthesia.

ON THE TECHNIQUE OF LAPAROCÆLIOTOMY.

GRUSDEFF, Kasan (*Russky Wratsch*, 1903, No. 1, 2), towards the conclusion of every laparocœliotomy pours into the peritoneal cavity as large a quantity as possible of a sterile saline solution, the composition of which is nearly the same as that of the plasma of human blood, as it contains potassium chloride, 0.359; potassium sulphate, 0.281; sodium phosphate, 0.271; calcium phosphate, 0.298, magnesium phosphate, 0.218; sodium chloride, 5.546, and soda, 1.546 grammes to each litre of water. The abdominal viscera, especially the intestines and omentum, are most carefully rinsed in this solution, and the fluid is then removed with the help of sterile gauze compresses. The entire proceeding, pouring in, rinsing and removal of the fluid is repeated several (three to five) times, and finally, the abdominal cavity is filled with the solution and the laparotomy wound is closed. Grusdeff has practised this method in fifty-three cases with only one death, due to tuberculous peritonitis and in no way attributable to the operation. From exact observation of the after condition of the patients, he is absolutely convinced that the operation is much better borne when this solution is so employed than otherwise; their general condition was better, there was less loss of strength, the heart's action was more regular the normal function of the intestinal canal was more quickly restored, and even the pains seemed less severe.

TRENDELENBURG POSITION.

FRANZ (*Zentralb. f. Gyn.*, 1903, No. 32) reports that in the Frauenklinik at Halle where 745 laparotomies have been performed with the patient in the Trendelenburg position, none of the serious consequences mentioned at the last

Surgical Congress by Kraske have happened, neither paralysis of the anterior tibial nerve, emphysema of the abdominal walls, heart failure, intestinal occlusion, aspiration of the contents of the stomach or apoplexy. He adds the recorded behaviour of the pulse and respiration in each position. The abdominal breathing was always diminished, while the thoracic was little if at all increased, so that the pulmonary ventilation was invariably depressed. After ether anaesthesia, bronchitis was four times as common in the Trendelenburg as in the dorsal position, but when chloroform was given there was no appreciable difference to be referred to the position.

ON PFANNENSTIEL'S SUPRAPUBIC FASCIAL INCISION.

MENGE, Leipsic (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 1259) has employed the curved incision above the symphysis in sixty-two cases, and holds that in addition to its being comparatively hidden, the cicatrix has the advantage over the vertical that, in consequence of the direction of the elastic fibres in the abdominal wall, it is merely a lineal scar, moreover it has no tendency to callous thickening nor to pigmentary deposit. When the wound heals by first intention there is absolutely no danger of hernia; if there be suppuration of the transverse wound in the fascia, hernia may form although there is not any extensive necrosis. Menge had only four instances in which the healing was interrupted—the infection in all being derived from the same source. He recommends the most stringent disinfection during the operation; the use of alcohol after sublimate; then dry asepsis, most careful hæmostasis, suture with Kroenig's kumol catgut, separate stitching of the muscular tissue, and of the superficial fascia or subcutaneous fatty tissue. He extends the indications for this incision to many of those cases of internal genital disease in which the preservation of the uterus is desirable, considering it to be a valuable alternative under such circumstances to the vertical abdominal wound.

OPERATIONS FOR MYOMA.

CZEMPIN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. xlix, H. 3), has performed 140 of these operations in the last twelve

years, the indications for intervention being in the majority of cases persistent and profuse menstrual hæmorrhage, but in other cystic degeneration, the incarceration of intra-ligamentary tumours, troubles from pressure, or ascites.

He prefers vaginal methods, and classifies the cases as follows: (1) isolated submucous growths; (2) other submucous growths; (3) subserous tumours and (4) total extirpation of the myomatous uterus. Altogether he performed fifty-eight vaginal and eighty-two abdominal operations with a mortality of 10 (= 12 per cent.) for the latter.

Subvaginal (!) amputation and total abdominal extirpation are both very dangerous proceedings, much more so than the conservative methods of enucleation, abdominal myomotomy and myomectomy. He performed fifteen conservative abdominal operations without a single death.

ON THE PRESENT PROBLEMS OF SURGICAL INTERFERENCE WITH FIBROMATOUS UTERI.

ABULADZ, Kieff (*Vratch*, 1903, April 5), is specially concerned in finding the safest and most conservative method of treating the subjects of myomatous disease of the uterus. He discusses the various methods of operative treatment, including supra-vaginal hysterectomy, complete removal of the uterus by abdominal section, removal of the uterus *per vaginam*, and enucleation of the tumours by abdominal section or *per vaginam*. Myomectomy leaves the patient in full sexual capacity and health, and extends the indication for the surgical treatment of myoma very widely. In exceptional cases, where the myoma is of doubtful nature, hysterectomy may be necessary, but myomectomy, after opening the abdomen is the operation of choice, because all the nodules can be seen with the eye and all vessels tied. Peritonitis, formerly the bugbear of operation, is not to be accounted a serious danger nowadays, when the modern method of asepsis and antisepsis are used. Taking into consideration the methods of surgical interference now practised and the results obtained by them, the author comes to the following conclusions: (1) Earlier surgical interference is to be desired in cases of myomatous uterus; (2) the ideal method of operation is myomectomy, when this is fully conservative and does not maim the patient,

and this completely conservative method of cure naturally widely extends the indications for removal of myoma of the uterus ; (3) the field for conservative vaginal myomectomy is limited ; (4) hystero-myomotomy being, in all its aspects, a maiming operation, should be limited to special cases ; (5) when the diagnosis is established in an early stage the vaginal method of hystero-myomotomy is to be chosen, and it is the safest way, and the asepsis does not require to be so perfect.

F. E.

OPERATIVE TREATMENT OF MYOMA DURING PREGNANCY.

FRANK, Olmultz (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 428), reports seven personal observations, and concludes that operative interference is indicated : (1) *during pregnancy* ; if the tumour is growing rapidly ; if the circulation and breathing are disturbed ; if there is reason to suppose that the myoma may lead to a premature interruption of the pregnancy ; if symptoms of peritonitis or incarceration appear due to the tumour ; or if the myoma is a polypous one, or proceeds from the vaginal portion of the uterus (danger of disturbed nutrition) ; (2) *during labour* ; myomata of the pars intermedia should be enucleated if there is no chance of overcoming the obstruction with the prospect of a living child ; perforation has to be considered when the aftercoming head cannot surpass the obstacle, or when the child is dead, or the mother has fever ; moreover, when the tumour arises from the supravaginal portion, abdominal enucleation and leaving the expulsion of the child to nature has to be thought of, and finally Cæsarean section and castration with or without the removal of the uterus.

THE TREATMENT OF UTERINE CARCINOMA.

KROENIG (*Muenchener m. Wchns.*, 1903, No. 35, S. 1528) in an address to the Jena Society for Natural and Medical Sciences, said : "The treatment of uterine carcinoma has entered on a new stage, inasmuch as the greater number of gynæcologists in the extirpation of the carcinomatous organ have abandoned the vaginal in favour of the abdominal route. The advantage of the abdominal method in my opinion lies less in the possibility of removing the

glands that may be involved than in the fact that it enables one to go much wider in the extirpation of the parametrium in sound tissue. Operating in Czerny's way, as one cuts round the cervix, and opens the utero-vesical pouch, no doubt one can keep the vesical portion of the ureter out of the field of operation, nevertheless that portion of the ureter which traverses the parametrium remains *in situ*, even when the uterus is detached from the bladder, so that in attempting to extirpate the parametrium as near to the pelvic wall as possible, it is a very easy mistake to include this portion of the ureter in the ligature. We must isolate this portion of the ureter when it crosses the uterina, and, after exposing it, lift it out of the parametrium, otherwise in the wider excision the ureter will certainly suffer injury.

"The isolation of the ureter is quite possible from below, especially if we employ Schuchardt's paravaginal incision to facilitate access to the parametrium, but I believe that the isolation, exposure and detachment of the ureter can be much more surely and easily effected by the abdominal route than by the vaginal.

"The abdominal operation has a higher rate of primary mortality, this rate has, however, within a few years been greatly diminished owing to the improvements in technique devised by our fellow-workers in many different quarters.

"The methods at present practised are practically two: (1) that of Wertheim; (2) that of Amann and Mackenrodt. Wertheim prefers the longitudinal incision in the middle line, Mackenrodt and Amann the transverse, with division of both recti. Mackenrodt moreover describes as an essential element in his operation, the stitching of the parietal peritoneum of the anterior abdominal wall to the peritoneum of the posterior wall of the pelvis, so as to exclude the field of the operation from the peritoneal cavity.

"At first I practised Wertheim's method almost exclusively, but in the last nine cases have adopted the transverse incision because it undoubtedly affords a better view of the field of operation. In nineteen operations by Wertheim's method I had one death; most recovered without fever, but the percentage of operability was only 50. It was with the view of raising this percentage that I recently adopted Mackenrodt's method; the operation by it is essentially more severe, as portions of the bladder, ureters,

&c., have often to be resected. Time will show what the primary mortality will be."

ENDOTHELIOMA OF THE CERVIX UTERI.

KIRSCHGESSENER (*Zeitsch. f. Geb. u. Gyn.*, Bd. xlix., p. 197) draws the following conclusions from the consideration of nine recorded cases of this rare affection. (1) Endothelioma of the cervix affects young as well as middle-aged women, but the number of cases collected is too small to justify any definite conclusions as to the influence of age. (2) It affects nulliparæ as well as multiparæ. (3) The clinical symptoms are those of cancer of the cervix with discharge and hæmorrhage. The growth is nodular and of variable consistency. It is impossible at present to establish a diagnosis without a microscopical examination. (4) In the cases under consideration no relapse has been observed after total hysterectomy, though Borst declares that there is a marked tendency in this disease to local relapse. (5) Considering the slow growth of this disease and its restricted tendency to recur, the clear indication for its treatment, when a microscopical diagnosis has been established, is intervention by a radical operation.

P. Z. H.

MALIGNANT CHORIONEPITHELIOMA AND THE ANALOGOUS GROWTHS IN TERATOMATA OF THE TESTICLES.

RISEL, Leipsic (*Muenchener m. Wchns.*, 1903, No. 39, S. 1688) in a work issuing from the Pathological Institute directed by Marchand, in the first place gives a critical review of the more recent literature of chorionepithelioma, with eight personal observations of these new growths. The conclusions he draws agree with the views enunciated by Marchand, and now very generally accepted. The cellular elements of which chorionepithelioma consists arise exclusively from the two layers of chorionic epithelium, and not in any way from the stroma of the villi or from the decidua, and these two layers—the syncytium and the cellular layer of Langhans—have a common origin, being both descendants of the foetal ectoderm. The remarkable discoveries of chorionepithelioma in metastases without the presence of any primary tumour in the uterus, may be attributed to the proliferation of the epithe-

lium of transported villi—such transportation frequently happening through the blood stream.

In the second part of his work Risel discusses the fact first made known by Schlagenhauser's astonishing report in June, 1902, that in teratoma, especially in such tumours of the testicle, cell proliferations are found which correspond so exactly with the proliferations in chorionepitheliomatous tumours, that they must be accepted as identical with the latter. In accordance with Marchand's view of teratomata, Risel derives these chorionepitheliomatous proliferations from the foetal ectoderm; histogenetically, therefore, they are equivalent to the other ectodermal structures of teratomata, and there is no ground for supposing that foetal ovular sacs (*Eihuellen*) or their derivatives take any part in the origin of these formations. As yet no observation of growths of the nature of hydatid moles in teratoma has been recorded which is not open to objection. He reports on two cases of his own.

The whole subject is treated systematically and comprehensively, and the work is a concise and reliable exposition of all that is yet ascertained in this difficult and at the same time practically important field of research.

PICK, Berlin (*Zentralb. f. Gyn.*, 1903, No. 37) objects to Risel's views, imputing to him the idea that he derives all chorionepithelioma from foetal ectodermic material displaced in the system of the patient. Pick does not deny the possibility of such an origin, but holds that the ordinary chorionepithelioma, such as described by Marchand, is invariably derived from chorionic epithelium, the product of conception.

THE ÆTIOLOGY OF SYNCYTIOMA M. VAGINALE WITHOUT TUMOUR FORMATION IN THE UTERUS.

SCHMAUCH, Chicago (*Zeits. f. Geb. u. Gyn.*, Bd. xlix., H. 3.), reports upon a case in Olshausen's Klinik, a powerful quartipara, who three weeks after the birth of a living child, and after normal labour and child-bed, began to suffer from vaginal hæmorrhage, and after undergoing several operations died in the tenth week. The section disclosed no primary tumour, but numerous syncytial metastases in the vagina, kidneys, lungs, spleen and brain.

From protracted histological investigation Schmauch

concludes that the initial stage of a syncytioma is to be found in cells lying isolated in the tissues or in blood clot, the so-called "syncytial strayed cells." The syncytium is nothing specific, but merely a stage in the development of the epithelial cells of Langhans' layer. Nor is pregnancy, in his opinion, indispensable for the formation of syncytial masses, but merely foetal cells which may form a tumour of the exact type of syncytioma malignum.

In the case under consideration there was no primary tumour, but a general dissemination of tumour germs had taken place during labour. Schmauch classifies syncytioma among the teratomata. Cases in which the child has been alive he explains by Ehrlich's lateral-chain theory, according to which in cases with syncytioma, the ability of the normally pregnant woman to form syncytiolysine is supposed to be interfered with or destroyed. Herefrom also is derived the idea of dealing successfully with cases, in which operation is hopeless, by a process of immunisation.

ZONACK, Berlin (*Archiv f. Gyn.*, Bd. lxx., S. 193), reports the case of a septemdecipara in whom after the birth of an hydatid mole, and curettage of the uterus three times within six weeks, vaginal hysterectomy was performed for deciduoma malignum, and who remained healthy six years after the operation.

CHORIONEPITHELIOMA OF AN UNCOMMON TYPE AND UNUSUAL COURSE.

FLEISCHMANN, Vienna (*Monats. f. Geb. u. Gyn.*, Bd. xvii., Heft 4), reports: In the course of two and three quarter years after the removal of an hydatid mole from a woman aged 27, a chorionepithelioma had developed to the size of a chestnut in the introitus vaginae; the uterus was enlarged and relaxed. The tumour was excised, extirpation of the uterus was declined. Repeated hæmorrhage from the vaginal wound had to be arrested by stitching. On account of uterine bleeding a reddish-brown tough nodule was enucleated from the right uterine wall, in doing which the uterus was perforated and a hæmatoma formed in the right parametrium. The patient declined any extended operation and was discharged. The vaginal wound healed

and involution of the uterus took place ; ten months after the operation menstruation was regular and there was no pathological change in the genitals. A thorough microscopical examination of the tumour and of the uterine nodule revealed an atypical chorionepithelioma of the uterus composed of syncytial cells, with vaginal metastasis. The cure of the case, in spite of the incomplete nature of the operative interference, is noteworthy.

PRIMARY GENITAL TUBERCULOSIS.

GOTTSCHALK (*Archiv f. Gyn.*, Bd. lxx., S. 74) reports : The uterus and adnexa were extirpated by the vagina from a virgin, aged 32, for tuberculosis ; and the presence of tubercle bacilli in the uterus, as well as in the tubes and ovaries, was established by cultures and inoculating. The patient remained healthy up to the time of writing, three years after the operation. Gottschalk concludes that the disease was hereditary for the following reasons : (1) The patient was a *virgo intacta*, and her father was tuberculous ; (2) clinically no other tuberculous lesions could be detected ; (3) permanent cure was effected by removal of the diseased genitalia ; and (4) tuberculosis of the ovary was established.

TUBERCULOSIS OF THE VULVA.

POEVERLEIN, Munich (*Hegar's Beitræge*, Bd. viii., H. 1), reports a case of a woman of 49, on the inner surface of whose right labium minus there was a tumour the size of a five shilling piece, with an uneven discharging surface ; it was diagnosed as sarcoma, but microscopical examination proved it to be tuberculosis. The case Pöeverlein, after discussing all similar ones reported, considers unique, as there was absolutely no ulceration.

OVARIAN TRANSPLANTATION.

F. H. MARTIN (*Chicago Med. Rec.*, 1903, July 15. *Sajous*, September) concludes from experiment and literary research that homoplastic or heteroplastic ovarian transplantation is not more dangerous, if aseptically performed, than any other small plastic operation on the appendages ; that homotransplantation, or hetero-transplantation, will prevent the atrophy of the genitalia which usually follows castration ; that the same effect may follow transplantation from

one species to another. Also that menstruation will, in women and monkeys, continue after homotransplantation, and that conception has followed homotransplantation in women, and both homo- and hetero-transplantation in animals. Furthermore, that ovaries transplanted to situations other than normal will maintain their vitality and functionate and will prevent the ordinary sequelæ of castration.

THE STRUCTURE OF THE CENTROSOME OF THE OVARIAN CELL IN MAMMALIA, MORE ESPECIALLY AS REGARDS THE MODIFICATIONS CONSEQUENT UPON EXPERIMENTAL INTOXICATIONS.

RONDINO (*Archivio di Ostetricia e Ginecologia*, 1903, June), from a series of experiments upon the ovaries of rabbits, cows and guinea-pigs, investigating the effects produced in them by the various toxins of infectious germs, concludes that: (1) The different methods of fixation and staining notably modify the form and structure of the whole field of observation in a way which may serve to explain the apparent contradictions in the results obtained by different observers. (2) In cases of intoxication and of infection by bacteria, the centrosome of the ovarian cell undergoes important modifications which may be grouped into two categories. (3) The first category includes the processes of progressive evolution and increase, and still more important, the multiplication of the central corpuscles; the second, the simply retrogressive changes, such as vacuolisation, granular degeneration and division of the centrosome. (4) These final modifications may be explained as consequences of the deleterious action of toxic substances upon elements so sensitive as are the mammalian ova; the first category as representing the primary phenomena of an attempt at cellular division, that is an attempt at parthenogenetic scission.

F. E.

SUBPERITONEAL TREATMENT OF THE PEDICLE IN OVARIOTOMY.

SFAMENI (*Bull. Soc. Toscano, Ost. Gin.*, 1903, March), alluding to the attention that of late years has been given to developing the technique of laparotomy, diminishing its dangers and improving its results, writes: One of the

most important of the new operative expedients is the covering with peritoneum all parts which, owing to the operation, are exposed, or project into the abdominal cavity. This procedure, which has been generally designated by the term "peritoneisation" or "peritoneo-plastic," aims at obviating two serious dangers, infection and the formation of adhesions. If we recollect that it is practically impossible for the operator to render his hands perfectly sterile, it becomes clear that the potentiality of infection exists in nearly every operative case, and that when sepsis does not occur it is because the whole of the conditions necessary for the growth of the germs are not present.

Stoker (*Brit. Med. Journ.*, 1895) and Bantock (*Brit. Med. Journ.*, 1899) have expressed views that wounds heal more firmly when they are not absolutely sterile, but their views are perhaps not the best guides to surgeons. Anyway, it is now generally recognised that the surgeon should not only prevent germs from entering the wound, but that he should also take every precaution to leave the wound in a condition to destroy any germs which may have eluded his vigilance.

At the International Gynæcological Congress, 1899, Bumm specially pointed out that in such cases the technique of the operation was of more importance than anti-sepsis. That the peritoneum in a normal state is able to receive pyogenous micro-organisms in variable quantities without being affected, is known to all; and it is also known that peritoneal infection depends, on the one hand, on the greater or less virulence of the germs, and on the other, upon the resistance which is offered by the peritoneum. The surgeon cannot estimate the virulence of the germs which may find their way into the field of operation, but he is to a certain extent acquainted with the conditions which lower the physiological resistance of the peritoneum. Now of the conditions which diminish this resistance, a most important one is the presence of foreign bodies in the peritoneal cavity, because these irritate, change and destroy the surface of the peritoneum, favour the localisation of the microbes and serve as points of origin of peritonitis. Such conditions exist precisely when the pedicle in ovariectomy is treated in the manner commonly adopted.

The pedicle is tied either simply or, if extensive, in several segments, and then divided about a centimetre above the ligature, and dropped as it is into the peritoneal cavity. The part of the pedicle beyond the ligature falls into necrosis and, by forming a nidus for germs and by reducing the physiological resistance of the peritoneum, offers the condition necessary for a septic process; moreover, it leads to the formation of adhesions, because it is itself denuded of peritoneum, and because it irritates and leads to the denudation of the peritoneal surface against which it lies.

It has been objected that a hæmatoma may form under the peritoneum, if drawn over the exposed surface, but such an occurrence would probably be due to insufficient hæmostasis before suture of the peritoneum.

Some operators have used the thermo-cautery to divide the pedicle, and others have cauterised the stump after ligaturing it; but Franz has shown that the dangers of adhesion and infection are greater after these procedures than when the pedicle is left simply nude of peritoneum.

Although in removal of the appendages and in hysterectomies, great trouble is taken to cover the exposed surfaces with peritoneum, in the latest text-books (H. Fritsch, 1901; H. Kelly, 1901; J. L. Faure, 1902), the treatment of the pedicle in ovariectomy remains the same; it is to be ligatured and dropped. It might be thought that the want of reference to this subject was due to the simplicity of ovariectomy and to the rarity of subsequent inconveniences; but Legueu (*Gaz. des Hôp.* 1895), gives fifty-seven cases of intestinal occlusion after laparotomy, and twenty-seven of these were after ovariectomy. Of course such occlusion may be due to various causes, including traction upon the pelvic colon from insufficient development of the ligaments; but the most usual cause is adhesion of the pedicle to the loops of intestine.

Although intestinal obstruction is the most grave, it is not the only trouble caused by adhesions, and numerous cases have been recorded in which a patient, cured by laparotomy, has but continued to have severe abdominal pains, and a second operation has proved these pains to be due to adhesions of the pedicle.

The following methods of covering the raw surface of the pedicle have been given:—(a) When the area of the

pedicle is small, Condamin (*Revue M d.*, 1893) advised that the peritoneum should be drawn over it and sutured. In this way the pedicle is completely hidden. (b) Kreutzmann (*Amer. Journ. Obst.*, 1896) brings the tumour out, and then dissects a collar from the peduncle down to the point of section. He divides the pedicle, picking up vessels one by one, and removes the tumour, then ties the vessels and sutures the collar of peritoneum over the end of the stump. (c) Rosen (*Przegląd Lekarski, Kracovia*, 1900) seizes the peduncle with one or two pairs of forceps and cuts above them; he ties the larger vessels, removes the forceps and ligatures any bleeding points. He draws the peritoneal sheath over the pedicle and ligatures it. The pedicle is thus provided with a peritoneal sheath. (d) A fourth method consists in ligaturing the pedicle as usual. A suture is then passed immediately below this primary ligature and tied, so that its two ends are in front. With a Deschamp needle the two ends are separately drawn through the broad ligament and tied on the front of this. The pedicle is thus pulled into, and adheres to, the posterior surface of the broad ligament.

It is not always possible to use exactly the same method, but the author prefers Kreutzmann's, and gives two cases in which he has used it. He, however, after making the collar, ligatures the rest of the pedicle *en masse*, and this he says has two advantages, namely, it secures all the vessels, and thus prevents oozing and it takes less time.

F. E.

The above proposal is hardly new, unless in Italy, for instance: DUNNING (*Med. Rec.*, 1903, September 26) briefly recalls the various methods of treating the stump from McDowell's first ovariectomy in 1809. He points out that that method should be chosen which is most likely to prevent hæmorrhage, infection, and adhesions. He prefers catgut ligatures, and if the pedicle is small, passes a single thread of No. 3 or No. 4 through it, ties it round one half and then reverses and ties it round the whole with a treble knot, cutting off the ends at a distance of 1 cm. The pedicle is then divided on the side of the tumour far enough away to leave a long button the centre of which he tries to hollow out

so that the edges can be brought together with fine catgut sutures; but before applying these latter, the arteries of the pedicle are seized in forceps and tied with catgut beyond the bite of the forceps. The raw surface of the pedicle is then covered with peritoneum. The pedicle in salpingo-oöphorectomy he treats in a similar manner with any necessary modifications; sometimes he buries the stump by drawing the peritoneum over it by a pursestring suture.

OVARIAN PREGNANCY.

MICHOLITSCH (*Zeitsch. f. Geb. u. Gyn.*, Bd. xlix., Heft 3, p. 508) reports two cases of ovarian pregnancy out of a total of 120 instances of ectopic gestation treated surgically at Wertheim's Klinik, Vienna. The two cases reported fulfilled the conditions laid down by Leopold as necessary to characterise a pregnancy as ovarian, namely: (1) the fallopian tube and fimbriæ must be completely isolated from the structure of the foetal sac; (2) the uterus must be united to the sac by the ovarian ligament, and (3) the ovary on the gravid side should be absent, and its tissue should have spread into the wall of the sac.

In the etiology of ovarian pregnancy two points have to be considered: (1) the retention of the ovule in the ovarian follicle, (2) the access of the spermatozoa to the ovule in that position. The retention of the ovule is attributed by Kiwisch to a mechanical cause, such as the rent in the follicle being too small to allow the exit of the ovule, and yet large enough to admit spermatozoa to fecundate it; the subsequent cicatrization of the rent would enclose the ovum within the ovary, or the ovule may become lodged and adherent in a depression in the follicle, and be fertilised there by the spermatozoa. With regard to the second point, it is generally admitted that the spermatozoa can reach the follicle. Little is known of the mode of nidation of the ovum in the ovary. From some cases in which the ovum is found in the centre of the ovary, one might argue that it buries itself in the ovarian tissue. Spiegelberg thinks it possible that the ovum might grow outside of the ruptured follicle whilst the placenta might develop and remain in the follicle. The formation of a decidua membrane seems to be very rare at any phase

of the pregnancy ; but decidual cells isolated and in small groups are found distributed in the fibrine between the foetal sac and the ovarian tissue and also in the vascular walls. The foetus may not infrequently go to full term, but the sac will more often rupture, presumably by distension of the thinnest portion of its wall. Molar transformation is probably not less frequent, relatively, in ovarian than in tubal pregnancy, but, owing to the absence of muscular tissue and to the vascular hilum of the ovary being seldom involved, when rupture takes place it is less sudden and generally accompanied with less shock. The author also dwells upon the difficulties and uncertainty of diagnosis as evidenced by the numerous errors discovered in the course of operations and of post-mortem examinations.

P. Z. H.

INTERSTITIAL GESTATION.

V. STATZER, Vienna (*Wiener kl. Wchns.*, 1903, No. 27), reports a case in which he operated for symptoms of internal hæmorrhage, and completely extirpated the foetal sac of an interstitial pregnancy in a woman aged 28 ; the blood lost must have been at least a litre, but she recovered uninterruptedly.

SOFTENING OF THE CERVIX AS A SYMPTOM OF PREGNANCY.

PINARD (*C. R. Soc. Obst. Gyn. Pæd.*, 1903, June) remarks that the modifications of the cervix uteri in ectopic gestation are often ignored or wrongly interpreted, as shown by the numerous records of ectopic gestation in which the cervix is declared to be *small, hard, not softened*. These expressions serve to perpetuate an error. Whenever there is gestation, whether uterine or extra-uterine, the cervix is softened ; but this softening diminishes and the os gradually returns to its normal condition when the ovum ceases to develop, whether it be expelled or not. In certain cases of ectopic gestation carried to term, this fact has led even experienced accoucheurs to doubt the actual existence of any pregnancy.

P. Z. H.

PERITONEAL ADHESIONS AND THE FUNCTIONATING UTERUS.

REED (*Amer. Journ. Obst.*, August, 1903), from a review of the literature of this subject, concludes : Adhesions

between the rectum and the uterus and ovaries produce local changes in the peristalsis and nutrition of the rectum, leading to catarrh, diarrhœa, stricture and even ileus and death. The healthy nervous system may temporarily escape, but after any intercurrent illness or other depressing factor, symptoms due to interference with the circulation or irritation of the nerves generally appear in the form of visceral neuralgia, neurasthenia or the like, which when pregnancy or labour supervenes may cause anxiety. Locally the functional activity of the uterus is impaired, but the disturbance is not in any way proportionate to the degree of the peritonitic changes, but rather to the anatomical extent of the disease. When the uterus is adherent to surrounding structures, there may be persistent and violent dysmenorrhœa. Separation of all the adhesions will then, as in a case reported by Tipjalnoff, give relief. Either sterility or tubal pregnancy may be a result of peritoneal adhesions, and while the effect produced upon the general system by such adhesions will be intensified by pregnancy, the subjective symptoms of pregnancy will themselves become more serious, and neuralgias, constipation, nausea and vomiting, will be intensified. The contest between the peritoneal adhesions and the almost resistless advance of the uterus in pregnancy may end in one of many conditions disastrous to the patient, and is fraught with the greatest interest to the obstetrician. If the uterus is adherent merely to omentum or intestine, there may be no hindrance to the pregnancy because of the mobility of these organs. If, however, it is bound to the abdominal wall or pelvic peritoneum by short, broad and dense adhesions, abortion must result. As the uterus enlarges, adhesions may give way and produce a fatal hæmorrhage, or they may be so strong that uterine rupture is produced by the growth of the fœtus. The uterus may be prevented from rising into the abdomen, whether it is retroflexed or not. Another possible effect is gangrene of the rectum, owing to the direct pressure of an incarcerated and retroflexed gravid uterus fixed by dense adhesions and compelled to grow in certain directions only. The adhesions of a retroflected womb do not always stretch, but even when they fail to do so the woman does not always abort. In a beautiful series of retroflexions reported by

Duehrssen, may be found nearly every variety of complication which occurs to the displaced uterus in pregnancy fixed by adhesions; the symptoms being the less pronounced and the later in point of time, the nearer the attachments of the adhesions were confined to the cervix. The series includes dangerous thinning of the uterine walls, frequent abortions, obstruction of the rectum, foetal death, inability to replace a retroflexed gravid uterus even under an anæsthetic without such great force as has resulted in abortion and peritonitis, serious and even fatal conditions of the bladder and instances of patients dying undelivered at term.

Ileus and intestinal gangrene may result from adhesions. The distending uterus may detach an adherent appendix or release the contents of an encapsuled abscess and so lead to fatal peritonitis. At labour also the recession of the uterus may, by its influence on bands of adhesion, cause such serious complications as intestinal obstruction or the release of the contents of an abscess.

In this review 73 cases altogether have been investigated, the results of which were as follows: 44 mothers died, 8 died undelivered; 42 children died. Only 15 of the 73 patients had normal labours at term; there were 5 foetal deformities, 6 placental adhesions, and 4 other placental anomalies; there were 28 spontaneous abortions.

Adhesions between movable organs and the pregnant uterus are rarely a source of danger, but where it is the adhesions which shut off suppurating pockets from the peritoneal cavity, the danger, as the uterus distends, is extreme. The pus should be evacuated as soon as possible after the diagnosis is made, without reference to the pregnancy; even if abortion follow the condition is less serious than when rupture occurs during pregnancy and labour. If the diagnosis is only made during labour one may temporise, accelerating the labour if possible by artificial aid.

J. F. J.

TUBERCULOSIS AND PREGNANCY.

VEIT, Erlangen (*Muenchener m. Wchns.*, 1903, No. 39, S. 1702), at the Seventy-fifth Congress of German Naturalists and Physicians, opening a discussion on this subject, said that the evil influence of pregnancy in promoting

the advance of phthisis was acknowledged. Compassion must be felt for the working woman whose consumption was accelerated by bearing children, and even a certain sympathy with the view of Hegar that as the child would probably inherit the disease, pregnancy in such women should be terminated in order to keep down the number of tuberculous individuals in the population. It is indeed certain that if a tuberculous woman conceives the disease may be communicated to the child in her womb, the bacilli are found in the placenta, and the dangers that childbed has for the mother herself are enormous. It is nevertheless certain that numbers of women, in spite of their tuberculosis, pass through pregnancy satisfactorily; in any case it is very rare for sudden death to occur from hæmoptysis unless during labour or premature delivery. In Veit's experience it is important to observe the weight of a tuberculous pregnant woman closely; this he has done systematically and insists that it is remarkable how often a tuberculous woman grows heavier during pregnancy than can be accounted for by the weight of the child, liquor amnii and placenta; indeed under favourable circumstances the increase may be very considerable.

If a regular increase in the weight of a tuberculous woman is taking place, interruption of the pregnancy, which would have no beneficial effect upon the disease, is by no means to be recommended. If, however, the increase in weight is less than normal, the woman's life is imperilled by her pregnant condition; it is questionable whether it can be saved by inducing premature labour, but it must be admitted that there are cases in which an attempt so to save it is justifiable. In patients who are losing weight during pregnancy the induction of labour is aimless. The removal of tuberculous women from their homes and domestic duties for the cure of their tuberculosis before they conceive is of more importance than terminating their pregnancy. These women should, as far as possible, be cured before they conceive, and then the occurrence of pregnancy may not materially hurt them. Even tuberculous parents may have offspring who are extremely useful members of human society, and Hegar's view is, for that reason alone, untenable. That no phthisical woman should be allowed to go to term is not to be accepted

as a general rule, and in every case before the induction of premature labour it should be ascertained whether there has been a loss of weight or otherwise.

SYPHILIS IN PREGNANCY.

ROSINSKY (*Monats. f. Prakt. Derm.*, 1903, No. 12, p. 732), from a special study of the contagiousness between mother and fœtus of syphilis contracted after conception, concludes that infection is very exceptional, the pathological lesions in the placenta being generally limited to that side which corresponds to the organism affected, the other being uncontaminated. The spermatic fluid of a syphilitic subject is, during the contagious period of the disease, capable of infecting a wounded surface by contact, probably to the same degree as the specific products of the first and second periods. The capability of the spermatic fluid to infect a wound by contact disappears with the contagious period of syphilis; but the specific action of the virus is reawakened by the union of the spermatozoon with the ovule in the process of fecundation. The immunity of the mother from infection by a syphilitic fœtus appears to be due to the effect of the products of the syphilitic microbes diffused throughout her system, and the microbes themselves are unable to pass through the placenta. The syphilitic alterations in the fœtal side of the placenta are characteristic and easily to be distinguished from non-specific lesions; whereas those of the maternal portion present nothing distinguishable from non-specific alterations; but only that portion of the placenta alone which corresponds to the organism infected, exhibits any syphilitic modifications. Contrary to the opinion of Finger, and notwithstanding the known exceptions to Colles' law, the author is of opinion that in all cases a mother should suckle her syphilitic child, and that a non-syphilitic child be suckled by its syphilitic mother.

P. Z. H.

TETANIA STRUMIPRIVA.

DIENST, Breslau (*Zentralb. f. Gyn.*, 1903, No. 29), reports a case of a quindecipara aged 45, in whom, on account of extreme dyspnœa in the ninth month of pregnancy, it

was necessary to remove a large goitre. Typical attacks of tetany which set in nine days afterwards led him to induce premature labour, and a mature living child was born. The convulsive attacks were then at first relieved, but returned on the tenth day of the puerperium, and have continued, chronic, from that time. Trophoneurotic changes in the finger nails, with extreme polyuria—as much as ten pints and a half a day—appeared about the same time. Under the use of thyroid tablets her general condition was passable.

A REPLY TO DUEHRSEN'S QUESTION, "IS BOSSI'S METHOD TO BE CONSIDERED AS A REAL ADVANCE IN OPERATIVE MIDWIFERY?"

BOSSI (*Archivio di Ostet. e Gin.*, May, 1903) writes: Duehrssen says that while knowing my methods of artificial induction of labour and of forced labour since 1890, he has not personally put them into practice, because he has found that mechanical dilatation of the neck of the uterus does not give good results in gynæcological work. There is a difference between dilating a pregnant and a non-pregnant uterus, but even as regards the non-pregnant uterus during the last seventeen years I have always been able, with Hegar's dilators, to obtain in a few minutes a dilatation of the cervix sufficient for any operation, and without any troubles of any kind. Duehrssen's criticism is practically based on assertions without proof, for he has not even tried my methods. He asserts that the method is not certain, because it is not in every case sure to obtain sufficient dilatation for the extraction of a living foetus. On the other hand, my experience and that of my assistants for twelve years, and of the world at large more recently, stands to prove that sufficient dilatation to save mother and child can be obtained in comparatively few minutes. He says the method is not prudent because the lacerations are not controllable; but, as a matter of fact, if the index and middle fingers be kept on the cervix, dilatation is continuously and perfectly supervised and guarded, and laceration may be entirely avoided. Characterising it as not innocuous, because it causes lacerations, hæmorrhage and infection, he advocates incision of the cervix, as if that did not cause hæmorrhage. I have tried

incisions instead of dilatation in some cases, so that I do not make unsupported assertions, and have proved by actual observation the grave dangers of frequent and severe bleedings; very often, on extraction of the child, the incision tears further, even to the extent of producing fatal lacerations of the inferior segment of the uterus. My personal experience has convinced me that to advise incisions in private practice, especially in the country, where the accoucheur is alone, is worse than imprudent, it is most dangerous, since it exposes the unfortunate surgeon to lose mother, child, and morally, himself. My method, more than any other, fulfils the necessary conditions of (1) dilating with certainty and sufficiently the cervix in any stage of pregnancy and in any condition; even in primiparæ the cervix may be dilated promptly and accurately so as to allow a living fœtus to be extracted; (2) it permits the dilatation to be quick or slow, from ten minutes upwards, according to the urgency of the indication; it affords at the same time both a mechanical and a dynamic action, and both under the control of the operator. No form of bag, neither colpeurynter nor metreurynter answer these purposes, nor can a bag or metreurynter be introduced into a closed cervix. My dilator does satisfy these demands; it can be used by any private practitioner, it entails no subsequent sutures, and by ensuring the emptying of the uterus renders the obstetrician master of the situation. Incision and vaginal Cæsarean section will almost cease to be done, and even abdominal Cæsarean section will lose some of its indications.

F. E.

CÆSAREAN SECTION FOR ECLAMPSIA.

STRECKEISEN (*Archiv f. Gyn.*, Bd. lxxviii., S. 678) describes two cases operated upon in Brunner's Canton Hospital, Muensterlingen; both were twin pregnancies in primiparæ with contracted pelvis respectively of the first and second degree. In the first case the child was dead when extracted and the mother succumbed to infection; in the second the result was quite satisfactory although the patient had been already for a fortnight in high fever. Compared with the results published by Kettlitz in 1897, showing in twenty-eight cases a mortality for the mother

of 50 and for the child of 62 per cent., Streckeisen's statistics exhibit a great improvement, for he, in twenty-eight cases also, is able to give a maternal mortality of 32 and a foetal one of 46.5 per cent. He adopts the view that in spite of all objections which have been raised against Cæsarean section in eclampsia, the operation is, in certain cases, entirely justified. Naturally it is a last resource when other means of saving the lives of mother and child cannot be employed or have proved futile. When in cases of contracted pelvis and eclampsia the child is alive, the symptoms become extremely threatening, and there are no pains, or in spite of pains the cervix remains undilated, in his opinion Cæsarean section offers the best hope of saving both mother and child.

CÆSAREAN SECTION. FRITSCH'S INCISION.

FLATAU, Nuernberg (*Zentralb. f. Gyn.*, 1903, No. 29), performed Cæsarean section twice within two years upon a sexipara, aged 40, by the transverse incision in the fundus, each time successfully for both mother and child. At the second operation he found the abdominal cicatrix firm, and the peritoneum of the wound, uterus and intestines, quite smooth and glistening; there were no adhesions whatever. Hardly a trace of the old incision in the fundus uteri was to be seen, and there was no thinning at the seat of the stitches. The case is given as an additional example of the advantages of Fritsch's incision.

RUPTURE OF THE UTERUS FROM MANUAL DETACHMENT OF THE PLACENTA.

OSWALD, Basle (*Hegar's Beitræge*, Bd. viii., H. 1), reports that in detaching the placenta manually after a normal labour the midwife perforated the uterus and dragged down a loop of intestine. The woman died in spite of laparotomy. In connection with this case he discusses the analogous ones in the third stage of labour which he has found recorded from the forensic point of view; some of them are almost incredible.

ANTERIOR VAGINAL HYSTEROTOMY FOR RIGID CERVIX COMPLICATED BY LACERATION OF THE LOWER SEGMENT OF THE UTERUS AND OF THE PARAMETRIUM.

RUEHL, Dillenburg (*Zentralb. f. Gyn.*, 1903, No. 34), in a primipara of 25, who came into his care after five days'

labour, with tetanus uteri, definite contraction ring, &c., found the external genitalia almost virginal in character, vulva and vagina small or incompletely developed, and complete rigidity of the cervix, but the uterus normal otherwise as regards its development. After typical anterior hysterotomy he succeeded in extracting the head with the forceps, but this resulted in two considerable lacerations of the vagina, complete tear of the perineum in addition to a large rent in the left lower segment of the uterus which extended into the parametrium. The lacerations were all stitched up and healed uninterruptedly.

THE BACTERIOLOGY OF THE PUERPERAL UTERUS.

MARX (*Amer. Journ. Obst.*, September, 1903) reports a series of bacteriological investigations of the puerperal uterus. With the most perfect aseptic precautions and with care taken to prevent contamination from the vagina or the cervix, cultures were taken of the blood-stained lochia in fifteen consecutive and, therefore, unselected cases of labour. The cultures in each case were taken from six to twelve hours after labour and afterwards on every other day. If the first three cultures were negative no more were taken unless the patient had a subsequent rise of temperature. Case No. 15 is not considered in the results, since it was one of most acute sepsis, from which the patient died. In the first culture from Case 1 and the second culture from Case 2 there was a slight fault in the technique, and they were the only ones that proved positive, showing streptococci and staphylococci. All the other cultures, forty-five in all, in the fourteen cases, proved negative. The normal puerperal uterus is therefore free from pathogenic organisms and such if found have been introduced by accidental contamination. If there are symptoms of fever and at the same time bacteria are absent from the uterus, the source of the disturbance is in some organ other than the uterus. In several of the above fourteen cases there was fever, as shown by the pulse and the temperature, but it was due to a slight epidemic of influenza; the uteri were proved sterile and no pelvic symptoms supervened. The growth of bacteria is inhibited in the vagina, and the uterus is sterile, but bacteriological examination shows the vulva to be a source

of infection. It must be carefully cleansed in all cases of labour, if not, the surgically clean hand may become contaminated and carry contamination into the uterus. Because a clean hand may have been introduced into a clean uterus it is not necessary to use uterine douching.

J. F. J.

THE TREATMENT OF PUERPERAL SEPSIS.

VINEBERG (*Amer. Journ. Obst.*, September, 1903) says that the species of micro-organism found in the uterine or vaginal discharges in a given case of puerperal sepsis is no criterion of its severity, and forms no safe guide as to the prognosis or treatment to be adopted. The attempt to divide the various forms of puerperal infection bacteriologically has not been successful, and investigations have also shown the utter unreliability of the bacteriologic examination of the blood either from a prognostic or therapeutic standpoint. While streptococci have been found in patients apparently not very ill, and recovering without any operation, the bacteriologic examination of the blood has been negative in cases of most profound and fatal sepsis. The treatment should be based upon the clinical history and upon the physical signs.

Conditions do exist that, lead to auto-infection in a very small percentage of cases, and explain the occurrence of sepsis in women who have not been subjected to vaginal examination and have been delivered in perfectly aseptic surroundings. The high mortality from puerperal sepsis in private practice, as compared with that in maternity hospitals, is a striking fact, due partly to faulty technique in asepsis, but very largely to difference in treatment. In public practice the patients are carefully observed, and as soon as there is the slightest elevation of temperature, are assumed to be aseptic unless some other cause is found to account for their fever, and the proper treatment is instituted at once. In private practice however, as a rule, just the opposite obtains, and a slight infection is allowed to develop into a dangerous one before a consultant is called in. If any retained placental or decidual tissues become infected and give rise to symptoms, they should be removed by the combined use of the finger and the sharp curette. In cases where the cervix will not admit the finger readily

and the retained tissue is at the fundus or in one of the cornua, the curette alone must be relied upon. If the placenta be sloughing and so adherent that it cannot be removed by the finger or by the curette, hysterectomy is indicated as it is, also, in sepsis due to a sloughing sub-mucous fibroid. When the vagina and perineum are found on careful inspection to be free from any wound and, on examination, the ligaments and adnexæ free from any exudate or enlargement, but the uterus is large, doughy and flabby, and chills and a quick pulse indicate acute sepsis, it is probable that the uterus is studded with small abscesses and it should be extirpated. A successful case of this nature is reported.

Infection may result in the formation of a subperitoneal but extrauterine abscess, which will ultimately require opening. If it be in the upper half of the broad ligament time may be allowed for it to become adherent to the abdominal wall when it can be opened without any danger. In cases of septic endometritis or infection of the placental site, recovery will probably follow early curetting with irrigation of the uterus and appropriate treatment for the septic fever. If this treatment is not adopted early enough, the patient will get steadily worse and die within a variable period of from ten to forty days. Can some of these cases be saved by a timely hysterectomy? It is said to be criminal to operate too early, but even if, after a deferred operation, an apparently hopeless case were by any possibility to recover, the woman would be left a sterile and a chronic invalid, with a fixed adherent tender uterus. One should not carry the principle of conservatism to the extent that it no longer preserves the health and the pelvic organs of the woman, but acts in the very opposite direction by destroying the pelvic organs and making the woman a permanent invalid.

Hysterectomy, when indicated, should be done by the abdominal route, because a larger portion of possibly infiltrated broad ligaments can be cut away by this route than by the vaginal, and there is likely to be less loss of blood. The whole uterus must be removed so that no infected cervix is left behind, and so as to provide drainage of the broad ligament stumps.

If the symptoms point to acute salpingitis, the abdomen

must be opened and the tube removed. In general septic peritonitis early section with free irrigation and drainage is the only treatment that will give a chance of life.

J. F. J.

THE SURGICAL TREATMENT OF PUERPERAL INFECTION.

BOLDT (*Amer. Journ. Obst.*, September, 1903) refers to the difficulty of appreciating correctly the pathological process present, especially in cases seen but once in consultation. In parametric abscesses and all suppurative conditions he insists that the incisions should be made more extensive than they usually have been, and for the removal of decomposing animal matter from the interior of the uterus he prefers the finger to the curette. Such grave surgical intervention as the extirpation of the uterus should, he thinks, be considered only in those instances in which the source of the infection seems limited to the uterus, and in which no other treatment is likely to be of avail; in patients apparently doomed to die without it, and who by it might possibly be saved; in short, only in the gravest forms of puerperal infection. Neither examination of the blood nor of the secretions from the uterus can, with our present knowledge, give certain information whether or not an operation is indicated. He has himself extirpated the uterus in severe cases in which the condition of the patient has been getting worse in spite of treatment; in some of them the blood showed micro-organisms, in others it gave a negative result, but they all died. He believes that the recoveries noted after abdominal hysterectomy were in patients in a better general condition, in fact in such a condition that he would probably not have even considered the operation at all at the time.

Hysterectomy is indicated only in cases where there is decomposing placental structure in the uterus that cannot be removed through the natural channel—a very rare condition—or in cases of suppurating and sloughing fibromyomata. Whether the extirpation should be abdominal or vaginal must be determined in each case according to the patient's condition, the size of the uterus and the laxity of the vagina. In diffuse peritonitis the indication is to open and thoroughly wash out the abdomen

and drain by Douglas' pouch, elevating the head of the bed.

J. F. J.

HERMAPHRODITISMUS VERUS UNILATERALIS.

SALÉN (*Verhandlung d. deutschen pathol. Gesellsch.*, 1900. *Frommel's Jahresbericht*, 1901, p. 998) described a case of castration of a patient, apparently a woman, at which one half of the right sexual gland consisted of ovarian tissue with follicles and typical ovules, the other half of testicular tissue, but without spermatogonium or other seminal cells. The left sexual gland was entirely ovarian. The patient, aged 43, was of feminine appearance, the clitoris was 5 cm. long, the external genitals otherwise feminine, the vagina a narrow canal 8 cm. deep. The uterus proved to be enlarged with several small myomata in its tissue, in addition to one as large as a man's head removed with the sexual glands. The tubes and ligaments were normal and the sexual glands were normally situated. Salén considered the case one of true unilateral hermaphroditism.

[Sir Hector Cameron's case we hope to publish in the next number of the Journal.]

NOTES.

WE have with regret to record the deaths of the following distinguished Obstetricians and Gynæcologists :—

Dr. DOMENICO TIBONE, Professor of Obstetrics and Gynæcology in the Faculty of Medicine at Turin, who died on October 5, 1903, suddenly, from apoplexy, at the age of 70, at Rome, where he was one of the Commission for the appointment of a successor to the late Professor Bottini in the Chair of Obstetrics in the University of Pavia. He was, from its commencement, one of the directors of the *Annali di Ostetricia e Ginecologia*. In 1890, on the occasion of the twenty-fifth anniversary of his Professorship, his pupils dedicated to him a volume entitled *Studii di Ostetricia e Ginecologia*. His commemoration at the next meeting of the Italian Society of Obstetrics and Gynæcology has been entrusted to Professor Calderini of Bologna.

Dr. ADAM GLISCZYNSKI, formerly Professor of Obstetrics and Gynæcology in the Faculty of Medicine at Warsaw.

Dr. M. Ph. KOSLENSKO, Privatdozent of Gynæcology in the Faculty of Medicine at Moscow.

Sir ARTHUR VERNON MACAN has been re-elected President of the Royal College of Physicians of Ireland; he has also been re-appointed King's Professor of Midwifery in the University of Dublin for a third term of seven years.

Dr. RICHARD DANCER PUREFOY, the retiring Master of the Rotunda Hospital, Dublin, received on Friday, 6th inst., the thanks of the Board of the Hospital for his conduct of the Institution and for the improvements he had introduced during his seven years' Mastership. On the 3rd inst. he had been presented with a bronze bust of himself, an illuminated and signed address by the nursing staff of the Hospital and other nurses who had qualified during his Mastership.

Dr. ERNEST HASTINGS TWEEDY, Gynæcologist to Steevens's Hospital, succeeds Dr. Purefoy as Master of the Rotunda. He was Assistant Master from 1892 to 1895.

Dr. FREDERICK WILLIAM KIDD, late Master of the Coombe Hospital, has been appointed Gynæcologist to the Meath Hospital, Dublin.

Dr. W. A. FREUND, Emeritus Professor of Obstetrics and Gynæcology and Director of the Frauenklinik in the University of Strassburg, celebrated his 70th birthday on August 26, 1903.

Dr. BERNHARD ROSINSKI and Dr. MAX LANGE, Privatdozenten of Gynæcology in the University of Königsberg have each been granted the title of Professor.

Privatdozent Dr. WALTHER STOECKEL has been appointed one of the Senior Physicians of the University Frauenklinik at Erlangen.

Dr. GEORGE FLECK has qualified as Privatdozent of Obstetrics and Gynæcology in the University of Göttingen.

Dr. LUDWIG BLUMREICH has been nominated Privatdozent of Obstetrics and Gynæcology in the University of Berlin.

Dr. A. NOTO has qualified as Privatdozent of Obstetrics and Gynæcology at Palermo.

Dr. VINCENZO CORDARO of Messina, is appointed Privatdozent of Obstetrics and Gynæcology at Padua.

Dr. C. MEYER-WIRZ, Medical Superintendant of the University Frauenklinik, has been accorded the "venia legendi" at Zurich.

Dr. STANISLAS DOBROWOLSKI has been appointed Privatdozent of Gynæcology in the Faculty of Medicine at Cracow.

Madame GAUSSEL, M.D., has, after competition, been appointed Chief of the Gynæcological and Obstetrical Clinic in the Faculty of Medicine at Montpellier.

Dr. JAMES D. VOORHEES has been appointed Lecturer on Midwifery in the College of Physicians and Surgeons of New York.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
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ATMOKAUSIS AND ZESTOKAUSIS.

PINCUS, Danzig (*Zentralb. f. Gyn.*, 1903, No. 50, S. 1519), holds that in the existing condition of gynæcological therapeutics it is unjustifiable for any practitioner either to undertake or recommend total extirpation of the uterus on account of uncomplicated hæmorrhage before he has tried atmokausis, and that cases in which the curette has been once used in vain should not be curetted again, but at once submitted to treatment by steam. No one can any longer deny that the therapeutic use of steam in gynæcology has now attained such a degree of certainty, and is in its application so free from danger that its technique may be described as far easier and simpler than that of curettage, and therefore Pincus does not any longer hesitate to change his position and declare that every practitioner who is master of the technique of curettage with all conditions and preliminaries, is capable of making good use of steam treatment in his practice and is called upon to do so. By the omission of narcosis, and the possibility of working with the simplest assistance or even, if necessary, without any at all, the difficulties in its employment have diminished or disappeared.

ON THE CAUSAL NEXUS BETWEEN GENITAL DISEASE AND
MENTAL AFFECTIONS IN WOMEN

RAIMAN (Chrobak's *Festschrift*, *Zentralb. f. Gyn.*, 1903, No. 48), in revolt against the indifferent attitude of most authors on the above question, especially in regard to practical treatment, quotes the thesis originally put forward, and recently again insisted upon (*ante*, vol. xvii., p. 49) by B. S. Schultze, that in many cases alienation

is due to genital disease, and that brilliant results may therefore be expected from expert gynæcological examination of all insane women.

As yet, owing to the rare co-operation of alienists and gynæcologists, no reliable statistics are available, and faith in the alleged causal nexus of the two forms of disease in question is based upon isolated observations, few of which are not open to objection, especially in regard to their ultimate results.

Raiman has had access to the plentiful material of Wagner's psychiatric klinik at Vienna, and reports upon the cases submitted to radical treatment, mostly in Schauta's klinik, during the last ten years. He gives sixteen more or less detailed histories, with the conditions found on examination after many years, and gives his own conclusions as follows: (1) In every instance of mental disease in women, the exact determination of the status somaticus must be completed by examination of the genital organs; (2) if any pathological condition which indicates treatment is detected by bimanual examination, it is imperative that the morbid condition should be cured; (3) at the same time in every instance the method chosen should be the most sparing to the patient, and when the indications for conservative and radical proceeding are equal, conservative measures should be adopted. It is particularly in the obscure field of reflex psychoses, that Raiman hopes for valuable results from the adoption of these principles.

PELVIC DISEASE SIMULATED BY CATARRHAL ENTERITIS.

GILLMORE (*Amer. Jour. Obst.*, 1903, Dec.) here refers especially to those patients often classed as neurasthenics, in whom, with symptoms resembling those due to pelvic disorders, there is a frailty and an anæmia quite distinct from other anæmias. Their expression is melancholic. They have bearing-down sensations, backache, nausea, sharp colicky pains across the abdomen and low down in the pelvis in the region of the uterus and ovaries. The onset of the disease is insidious. The patient complains of exhaustion and is excessively nervous and, notwithstanding a good appetite, she steadily loses flesh. She describes her bowels as quite regular, though she suffers

from attacks of constipation followed in a few days by diarrhœa. These symptoms may be associated with some pelvic disease; but if the gynæcologist on examination finds no organic pelvic lesion, he may put her down as a neurasthenic, and treat her accordingly entirely in vain. If, however, the stools are examined they may be found to contain quantities of stringy mucus. The strings will vary in length and thickness, and there may even be a membranous coat of the intestine. Moreover, in addition to more or less mucus—and there may be no more than a few small flakes—there will be large quantities of undigested bread and vegetables. Each movement of the bowels is preceded by griping pains, and the abdomen is, as a rule, tender to palpation. Fifteen cases are reported in detail, and the two chief features in all of them are that the patient was first submitted to treatment for some supposed pelvic disorder, but she was cured by attention to her catarrhal enteritis. In treatment of such cases patience is the prime requisite for success. The diet, even in very marked cases, may be comparatively generous: clear soups, eggs in all forms, one or two quarts of milk daily, rice in small quantities, small amounts of bread twice baked, custards, roasted and broiled meats; vegetables are restricted entirely at first, as well as all uncooked fruits, pastry and cake. Cascara sagrada should be given for the bowels, and if there is any tendency to obstinate constipation, or to unduly free movement, high flushing of the colon is necessary.

J. F. J.

ON GRAPE-LIKE MUCOUS POLYPI OF THE CERVIX UTERI.

SCHIROKANER (*Thesis*, Breslau; *Zentralb. f. Gyn.*, 1903, No. 41) reports that in a woman, aged 49, who had for some years been aware that she had a tumour in her vagina, but was otherwise healthy, a polypous new growth, about the size of a child's head and covered with cystic projections, some with pedicles, was found projecting from the vulva. When Pfannenstiel operated, it was found that the cervical canal was inverted, and that the grape-like new-growth was attached by a pedicle to the internal os. The woman recovered, after removal of the uterus above the cervical canal, and had remained free from recur-

rence for three and a half years. Microscopical examination proved that the wall of the individual grape-like bodies was formed of connective tissue and of the superficial epithelium of the cervical mucous membrane, and that their contents consisted of pseudomucin. Some isolated tuberculous cervical glands were also found, and in the pedicle, isolated cell-proliferation of individual glands.

VIENNA PASTE IN THE TREATMENT OF CERVICAL METRITIS.

RICHELOT (*C. R. Soc. Obst. Gyn. Pæd.*, November, 1903) advocates the use of Vienna paste in inflammation of the cervical endometrium with erosion, laceration or tumefaction of the os, and reports several cases of long standing so treated with gratifying results. From eight to ten applications, at a week's interval, are generally necessary to effect a cure, it being essential to destroy the superficial tissue, by sloughing, in order to reach the deeper glands affected. The application of the caustic gives little or no pain, nor did he have any cases of atresia in an experience of ten years, though a few of such have been recorded by others. When pregnancy has followed this treatment no bad effects attributable to the caustic have been noticed.

P. Z. H.

ON NASAL DYSMENORRHŒA.

SCHIFF (*Chrobak's Festschrift, Zentralb. f. Gyn.*, 1903, No. 46) draws attention to the brilliant results that, in certain types of dysmenorrhœa, have attended the nasal treatment based on the well-known theory advanced by Fliess. These brilliant results have been obtained by all authors who have tried this method, and are admitted even by those who, like Kroenig, do not consider the arguments for a special connection of the nose with dysmenorrhœa to be convincing. Schiff then turns to those who decline to admit that the success of nasal treatment is of any great theoretical importance, and who absolutely deny that there is any intimate relation between the nose and the pains of dysmenorrhœa, attributing the relief partly to the general effect of cocaine, partly to that of suggestion, and contends that, in the face of the many unassailable facts, it is illogical to refuse to attribute the

success of the treatment to the contested relation between the nose and the genital organs and dysmenorrhœal pains.

We are completely in the dark as to the specific way in which the connection between nasal irritation and dysmenorrhœal pain comes into action. Two ways only are possible, simple projection of the pain, and reflex action. Though clinically the entire process resembles sensory projection of pain (sensory irradiation), the presence of a motor link in the chain seems nevertheless extremely probable, and this especially so because amenorrhœa that has persisted for years may be promptly relieved by nasal treatment; and this is inconceivable except upon the supposition that nasal stimulation can by reflex action influence the innervation of the uterus, or the condition of the circulation within it.

Schiff, therefore, made experiments upon animals to obtain evidence as to the existence of a true reflex between the nose and the uterus; in place of direct observation he employed the more delicate method of kymographic diagrams, which enabled him to register contractions too slight to lead to any movement of the uterus visible to the naked eye. His experiments are described in detail with reproduction of the resultant curves, and he summarises the results as follows:—

In bitches, whenever the uterus could be stimulated in any way, intense reflex action upon it from the nose was demonstrable. On comparing the reflex effect of nasal stimulation with the action of other, and even much more powerful, stimulants, the reflex effect of nasal stimulation proved to be much greater than that of any other.

The existence of an intense, well-established reflex influence from the nose upon the uterus in bitches is therefore proved with certainty, and clinical facts show that it is extremely probable that such reflex influence exists in women.

SHORTENING THE ROUND LIGAMENTS.

LONGYEAR (*Amer. Jour. Obst.*, 1903, Nov.) devised "the blunt hook" operation, and has practised it because it does most good with the least risk. The technique is briefly as follows. Begin half an inch inside the point

over the position of the internal ring and cut towards the pubic end parallel to Poupart's ligament for one inch through skin, fat and superficial fascia. Eye retractors and blunt hooks are then used, and the tissues are separated down to the aponeurosis of the external oblique, which is laid bare to the extent of about one square inch. A puncture is made through this aponeurosis, a quarter of an inch long, situated just above Poupart's ligament and to the back of the square inch of cleared aponeurosis; through this the blunt hook is inserted, and the ligament drawn out with some of the fat of the canal along with it. The ligament is isolated and drawn out to the necessary length. An aneurysm needle is passed through the aponeurosis and the loop of ligament drawn through it and folded back on itself, and then made fast with one stitch of kangaroo tendon. The suture embraces in its grasp the edge of the aponeurosis, where the ligament first passes through it, half of the ligament at the same point and half on each side of the loop that is folded back on it. The skin is then sutured. The operation can only be done for mobile uteri without diseased appendages, or in cases in which adhesions have been previously broken up by abdominal section. The cases reported are 58 in number; the first one was in 1899, and the durability of the result, therefore, can only be seen for a limited time. In 48, a late examination has shown the uterus to be in normal position; in 6 cases it remained normal for from two to five months after operation, but they were then lost sight of. There was partial failure in one instance, complete failure in two. The uterus was held in normal position by one shortened ligament only in three; once neither ligament could be found. There were three labours after the operation, the uterus subsequently remaining normal. The following additional operations were performed at the same time as the Alexander operation: Perineorrhaphy, 24; trachelorrhaphy, 20; curettage, 53; abdominal section, 3; posterior colporrhaphy, 1. One of the cases of complete failure was doubtless the result of a severe suppurative inflammation, which continued for over two weeks after the operation. The infection was the result of much handling of the patient incident to collapse from anæsthesia.

In the discussion of this paper at the American Association of Obstetricians and Gynæcologists—

ILL (of Newark) had done the operation twelve or fifteen times, but, although the result as far as the uterus was concerned was good, there remained a painful scar and pain in the round ligaments.

GOLDSPOHN advocated opening the abdomen more often, so as to be absolutely certain of the condition of the appendages and of adhesions.

GILLIAM did not think anything was gained by not opening the abdominal cavity, while doing so enabled one to be satisfied that there were no internal complications.

MCMURTRY pointed out that the Alexander alone, without the curetting and perineorrhaphy or trachelorrhaphy, was of very little value. He approved of opening the abdomen if there could by any possibility be some adhesions or disease of the appendages.

LONGYEAR thought that pain in the scar was probably due to some exudate round the ligaments, and it would last only a limited time.

J. F. J.

A NEW METHOD OF SUSPENSION OF THE UTERUS BY THE ROUND LIGAMENTS.

BARDESCU, Bucharest (*Zentralb. f. Gyn.*, 1904, No. 3), has had good results in five cases from the following operation: After opening the abdomen and separating any uterine adhesions, button-hole openings are made in the abdominal wall at each side, and the round ligaments are drawn through these openings and made fast. The peritoneal cavity is then closed, the loops of the two ligaments are brought into apposition and stitched together, and the skin is then closed over them. He has had no accident as yet, and all five cases were completely cured.

CONSERVATIVE GYNÆCOLOGY.

COE (*N.Y. Med. Journ.*, 1903, October 31) points out that true conservatism consists in what is best for the patient. He fully believes in the propriety of preserving the ovaries, even if some risk of a second operation is run; though in more than 5 per cent. of his conserva-

tive operations he has been obliged to reopen the abdomen in order to effect a cure, and from his observation of the work of other surgeons he thinks this fairly represents their common experience. Those who employ the vaginal route report better results. The chances of a recurrence of the original pathological conditions vary according to the character of the adhesions and exudates found at the first operation, and the extent of the denuded surfaces left within the pelvis. If pus is present and foci of infection are left, the result is even more doubtful, in spite of the gauze tampon.

THE ABUSE OF RADICAL OPERATIONS IN AFFECTIONS OF THE ADNEXA.

BARONE (*Archivio Ost. Gin.*, October, 1903), quoting as a motto, "*propter solum ovarium mulier est quod est*," says that the treatment of adnexal disease was medical till, in 1872, Lawson Tait inaugurated an era of surgical methods by declaring that diseased appendages must be considered as cystic tumours for which ablation was the only possible cure. Péan afterwards proposed uterine castration as the best means of attacking purulent collections in the pelvis and securing drainage of the cavity. Polk, in America, perfected the operation of utero-ovarian castration first proposed by Lawson Tait in suppurating lesions of the adnexa, and the technique was still further improved by Doyen and Richelot. A mad enthusiasm for radical measures, oöphorectomy and hysterectomy, then set in until, in 1878, Spencer Wells denounced it, declaring that "surgeons remove the ovaries of women with the same indifference that gelders take out those of sows." A reaction then began, and Pozzi, Martin, Mangiagalli and Polk turned their attention to devising conservative operations. Barone sums up the matter as follows: On the ovaries and tubes conservative operations are to be preferred to radical ones. They afford perfect relief in 70 per cent. of ovarian cases and in 87 per cent. of tubal disease, and are nevertheless insignificant in their gravity. They preserve menstruation in 97 per cent. of the cases, and fecundity in from 10 to 12 per cent., with a minimum for operations upon the tubes of 4 per cent. They are not

followed by any of the troubles of the artificial menopause noticed by so many authors to occur in 93 per cent. of cases in which the ovaries are removed. In young women especially, conservative operations are absolutely preferable to radical ones, because they do not interfere with the ovarian functions, ovulation and menstruation and internal secretion, nor give rise to the nervous disturbances consequent upon removal of the ovaries. The disturbances following ovarian or utero-ovarian castration are not only real but have often been more serious than those affections for which the operation has been performed; they depend not merely upon the cessation of menstruation, but on the suppression of the internal secretion of the ovaries. In order, therefore, to preserve the functions of the ovaries, so important for metabolism and for the organic balance of the system, conservative measures mutilating the ovary and tube as little as may be are to be preferred to radical operations. When a tube is diseased but the ovary is sound, the tube should be ablated or resected, but the ovary should be preserved with its function unimpaired. Should the uterus be so seriously affected as to constitute a danger to the woman it should be removed, but the ovaries, if healthy, should be left to keep up their function of internal secretion. Ovarian organotherapy has most beneficial effects in diseases arising in the genital sphere, but it should not be administered to pregnant women, as to them it is most dangerous. The sufferings and mental disturbances due to the genital sphere or consequent upon the natural or artificial menopause after castration, are materially relieved by ovarian organotherapy. The benefit afforded by such treatment in amenorrhœa and chlorosis is rapid and constant, not merely improving the general condition, but restoring the activity of the menstrual function indispensable for complete cure. Barone recommends the administration of ovarian juice, beginning with one and increasing to three centigrammes a day; the usual dose of ovarian substance is ten centigrammes daily in from two to six pills.

F. E.

THE ABDOMINAL AND VAGINAL ROUTE IN VARIOUS FORMS OF DISEASE OF THE INTERNAL GENITALIA.

FRITSCH, Bonn (*Chrobak's Festschrift : Zentralb. f. Gyn.*, 1903, No. 49), in regard to the vexed question as to whether

the internal genital organs of a woman should, when operating is necessary, be attacked from above or below, protests against fixed principles, and points out that the danger of laparotomy should not, in zeal for the vaginal route, be exaggerated.

For myomata, the chief points in the choice of the route are, whether the approach from below is easy and whether the vagina is a roomy one; the size of the tumour is far less important than whether the woman has borne children and has a large and extensible vagina. In all cases in which the vagina is narrow, the myoma irregular in shape and possibly developed within the ligaments, or in which the tumour is not a simple enlargement of the uterus, Fritsch esteems a laparotomy to be an operation incomparably easier and quicker, technically more complete and more favourable for re-convalescence, than the vaginal method. The surgeon who on principle chooses the abdominal route, will have fewer disappointments than one who on principle adopts the vaginal one.

For suppurating adnexal tumours, and for uterine adhesions, Fritsch is entirely in favour of laparotomy. General principles of treatment are not to be derived from a few miraculously favourable results, which merely imply that misfortune has not been inevitable. Even for small and very small ovarian cysts, he prefers laparotomy as a better and more especially as a safer proceeding than anterior colpotomy. By employing Pfannenstiel's method (transverse suprapubic incision) the danger of ventral hernia is now no longer worth mentioning.

Posterior colpotomy Fritsch recommends only when on drawing down the portio the tumour in Douglas' pouch does not slip away from the finger, but is drawn downwards also, so that one has reason to expect to find an abscess, and to be able to evacuate the pus and obtain a conservative cure.

Fritsch altogether disapproves of vaginal operations for recent extrauterine gestation which can generally be dealt with by laparotomy without hæmorrhage. It is only when the tumour lies in the pouch of Douglas and the ovum has been dead for some time that he adopts the vaginal post-uterine way; that is to say the operation for hæmatocele which has been practised for thirty years.

In regard to uterine carcinoma, the only way to improve the prognosis as to the permanent results, in Fritsch's opinion, is to avoid operating in cases in which recurrence is certain to take place. He does not believe that better results will be obtained by extended indications, but rather that after a few years' old, the vaginal methods confined to "good cases" will again be properly appreciated.

In the operations for retroflexion there are two points that seem to him most important: (1) that the operation should be devoid of danger in itself and in its results; (2) that it should be efficient in preventing recurrence. His attitude therefore to the various methods is the following:—

Ventrofixation is the most reliable method and suitable for all cases. The Alexander-Adams' operation is the least dangerous, and when the uterus is movable is almost as reliable as ventrofixation.

Vaginal fixation and vesicofixation have no advantages over the other two methods, and are attended by a number of dangers which should lead to these methods being confined to cases in which some additional object, such, for example, as sterilisation, is in view (*cf.* Flaishlen, *infra*).

HAND DISINFECTION AND INDIARUBBER GLOVES.

ZWEIFEL (*Zentralb. f. Gyn.*, 1903, No. 45), presiding at the Leipzig Obstetrical Society at the discussion of a paper by Fueth upon disinfection of the hands, said: "We have to face the fact that rapid disinfection of the hands is very difficult in all cases, and that when they are laden with pathological germs it is quite impossible, and we must therefore accept as fundamental principles: (1) that our hands should be protected from exposure to infection, and (2) that indiarubber gloves should be worn in performing operations. It is a matter of principle with us to wear indiarubber gloves during every operation, obstetrical or gynaecological, and even in vaginal examinations, in Friedrich's way, and we can assure any of our colleagues who may hesitate to adopt this principle for fear of its diminishing the acuteness of perception by touch, that this is merely a question of practice which will be overcome in a very short time."

Zweifel did not adopt this principle because of dissatis-

faction with his earlier results, nor because of failures experienced with the methods of hand disinfection he had tried, but because, in the first place, his skin suffered from the various disinfectants employed, and secondly, because operating in indiarubber gloves excluded the danger of transferring infectious germs in cases of fever. He could not assert that his results had been sensibly improved by the use of gloves, but after overcoming the initial discomfort he had never intermitted the practice. He was convinced that the use of these gloves was no merely evanescent fashion, but would become more generally adopted in medical practice until it would seem incredible that even any anatomical section or surgical operation on the cadaver should be performed without them.

THE ADVANTAGES OF VAGINAL DRAINAGE OF THE PERITONEAL CAVITY.

OBERLAENDER (*Zeits. f. Geb. u. Gyn.*, Bd. 1., Heft 3) concludes: The simplest and best way of draining the peritoneal cavity is by the vagina; iodoform gauze should be employed, but after aseptic operations, sterile gauze will suffice. Such drainage is indicated: if the peritoneum has been soiled by large quantities of pus, or if either surfaces stripped of peritoneum, or large cavities with tattered and infiltrated walls, are left discharging pus into the abdominal cavity, and also in operations which have caused or threaten intestinal perforation. Vaginal tamponade may be necessary to arrest bleeding from parenchymatous surfaces or cavities in cases of extrauterine pregnancy, or of tumours incompletely removed, or of intraligamentary development.

VAGINAL DRAINAGE FOR SUPPURATION IN THE PELVIS.

GOLDSPOHN (*Amer. Jour. Obst.*, 1903, Nov.) gives a brief outline of the anatomical arrangements of the subperitoneal connective tissue of the pelvis, drawing the necessary distinction between parametritis and perimetritis. Abscesses in the tissue round the cervix, over the vaginal vault, will be universally opened from the vagina. Hæmatoceles and circumscribed peritoneal exudates, when they become infected, are readily accessible from the posterior cul-de-sac, and should be drained from the vagina.

If the appendages are inflamed they will more easily be treated by abdominal section later on. If the exudate is not purulent the abdomen can be opened straight away, and whatever is necessary can be done, ending by vaginal drainage. Unilocular tubal sacs containing pus and ovarian abscesses, whose honeycomb structure can be broken down into one cavity by the finger, should be opened from the vagina and solidly packed with gauze, which should remain *in situ* a week. An abdominal section, if necessary at a later period, will be done with more safety, and with a better chance of saving some part of the appendages, since the line of demarcation between the redeemable and the hopelessly diseased parts will be more definite. When a second operation is necessary, the source of infection has usually been the vermiform appendix.

In the discussion of this paper at the American Association of Obstetricians and Gynæcologists—

ILL said that in cases of cellulitis or pelvic lymphangitis, the opening must be from below and the sooner the better. In tubal and ovarian abscesses the old-fashioned vaginal blister was less dangerous than a vaginal opening. An objection existed in the tender and painful vaginal scar, as long as menstrual and sexual life continued. The excessive hæmorrhage which sometimes occurred in the opening of these abscesses was a serious danger.

GILLIAM did not think one was justified in resorting to vaginal drainage unless there was cellulitis, nor that it was well to drain pus tubes unless they were very accessible and could be reached without going through healthy tissues to get at them.

LONGYEAR approved of vaginal drainage in cellulitis, but in pyosalpinx or ovarian abscess, only as a life-saving temporary measure where a woman was *in extremis* and could not stand a radical operation. He preferred a rubber drainage tube to packing with gauze.

CARSTENS approved of opening pus cavities from the vagina, though some of the cases would require a radical operation later on.

J. F. J.

THE APPENDIX IN GYNÆCOLOGICAL OPERATIONS.

NEWMAN (*Jour. Amer. Med. Ass.*, 1903, October 10) points out that functional disturbance in the pelvis may produce disturbance in the neighbouring abdominal viscera, the condition of which, especially of the appendix, should always be examined when the abdomen is opened for pelvic disease. If catarrhal, adherent, or containing concretions, it should be removed; moreover, it is not sufficient to break up or separate adhesions of an attached appendix.

As macroscopic examination of the appendix is not always conclusive, its prophylactic removal, when the abdomen is already open, should in each individual case be determined by the best judgment of the surgeon and the condition of the patient.

The frequency with which the appendix is infected by contact with diseased genital organs is pointed out by Kelly, who cites twenty-seven adherent appendices in 100 hystero-salpingo-oöphorectomies; the figures of Peterson correspond. The early removal of pus tubes, infected cystic tumours, and the like, is therefore most important, and after operations in which the appendix is not removed, steps should be taken for its careful protection from any denuded peritoneal surfaces or involved areas. Apart from the greater danger of infection from neighbouring viscera and the somewhat greater difficulty of differential diagnosis, we have in the female more available means of exploration, a better prognosis and greater facilities for the operative and non-operative relief of appendicitis than in the male.

THE SUPRAPUBIC TRANSVERSE FASCIAL INCISION.

PFANNENSTIEL (*Samml. kl. Vorträge*, n.f., No. 268) modifies the Kuestner-Rapin incision by carrying it, not merely through the skin at the edge of the pubic hair, but also through the aponeurosis of the three abdominal muscles which in that region lies in front of the recti. The incision through the recti is vertical. In closing the wound the aponeurosis is stitched separately, and even if there should be a gap in the cicatrix, it is not drawn upon by muscular action. As none of his patients have died from

the operation, he holds that laparotomy with transverse section of the suprapubic fascia is no more dangerous than colpo-cœliotomy, an operation he does not approve of except for vaginal fixation or hysterectomy. In view of the excellent cosmetic affect (the cicatrix being hidden by the hair), and the absence of any risk of hernia, he recommends his method for slight interventions, such as ventrofixation, adnexal operations or extrauterine pregnancy. For larger tumours the longitudinal incision must still be used, as the transverse does not allow free enough access to the field of operation.

MENGE, Leipsic (*Monats. f. Geb. u. Gyn.*, Bd. xvii., S. 1259) has employed the transverse incision in thirty-two cases (while the article was being set up in thirty more), but differs from Pfannenstiel in making the wound whenever he can do so inside the limit of the pubic hair, and has not met with any difficulty in the healing of the wound from this practice. This method of making the incision he considers of great importance for the sake of appearances, and it is only when operative work has to be done above the brim of the pelvis that Menge will adopt the much higher transverse incision recently recommended by Pfannenstiel.

The essential importance of the transverse wound is the avoidance of hernia, for when the wound heals by first intention the formation of such hernia is practically impossible. On the other hand, if suppuration take place, even without any necrosis of the fascia, a hernia may occur at the point of intersection of the transverse fascial and vertical muscular incisions. Even so, in whatever way the wound heals, Pfannenstiel's incision is vastly superior to the vertical abdominal wound as regards the prevention of hernia. Since suppuration occurs oftener after the transverse than the vertical incision, the greatest care must be taken to exclude everything that may possibly interfere with the healing of the wound.

In his first series of thirty-two cases Menge had no suppuration, but in his second series of thirty, he met with four successive instances of interrupted healing. He describes the precautions he takes on the points most important in this direction. In addition to washing his hands with solution of sublimate or of sublamin, ethy-

lene diamine sulphate of mercury, he invariably soaks the skin in 75 per cent. alcohol, and then anoints it with sterilised paraffin-xylol. During the operation he employs only dry asepsis. He and all his staff wear sterilised gauze veils as mouth covers.

Suppuration is rarely due to the escape of products of inflammation from the abdominal organs into the wound, except when there is adnexal infection due to streptococci or staphylococci, or when the contents of the bowels or putrid stinking discharge of an abscess reaches the wounded surface.

Menge uses Kroenig's cumol catgut exclusively except in stitching the perineum, then silk and twine. He ligatures every bleeding vessel in the wound, unites the muscular layers with five or six loosely-tied separate sutures and stitches the fascia by itself with catgut. He attaches much importance to sewing the layer of subcutaneous fat together, by itself, and also the superficial fascia, even in the Alexander-Adams' operation, as a means of avoiding hæmatoma and ensuring primary healing of the wound. He does not drain the abdominal wound.

While Pfannenstiel's incision has the great advantage of leaving the bowels less exposed, and in giving free access to the lateral parts of the pelvis, the approach to the pouch of Douglas is not so easy as by the longitudinal incision.

Menge prefers abdominal section inasmuch as it enables one to define, both upwards and downwards, the limits of the intervention better than colpotomy; occasionally to make a more radical, but more often a more conservative operation, and never forces one to sacrifice important parts for technical reasons. Nevertheless he thoroughly recognises the value of colpotomy, and continues the practice in certain cases.

The transverse incision is suitable for many operations on the internal genitals in which it is desirable to preserve the uterus. Menge enlarges the field for it by admitting new growths of the uterus and ovaries, the abdominal enucleation of myomata, and large ovarian cysts without adhesions, and consisting of a single or very few chambers.

CAUSES OF DEATH FOLLOWING PELVIC AND ABDOMINAL OPERATIONS.

PRICE, Philadelphia (*Amer. Jour. Obst.*, 1903, Nov.), thinks it well that every operator should have over him the weight of public opinion, but that neither the dread of a death nor the criticisms or comments of colleagues or hospital directors should stay his hand in the wise choice of material, or in the completion of operations that he knows should not be abandoned or imperfectly performed. With hospitals in every small village, and in consequence of the want of training of the surgeons, the mortality in abdominal surgery was now far higher than it should be. He quotes two instances of incompleted simple operations further complicated by the careless inclusion in the abdomen of a gauze towel, and says that post-operative sequelæ and deaths from gauze are thrice as common as ever they were from sponges. Good well-trained nurses keep the mortality down. Sound judgment is required on the part of general practitioners and inexperienced operators in deciding between cases easy and difficult to operate upon. If the acute septic peritoneal cases of a surgeon all die, his operation, his toilet and his drainage are all at fault. Removal of the appendix in mild and simple typhoid fever is responsible for a high mortality. Preceding vaginal incisions and perforations favour a high mortality in later operations for the clean removal of the remaining pelvic pathology. Patients with suppurating tubes and ovaries or ectopic pregnancy, after vaginal incision, seldom acquire sufficient improvement in vital force and stamina to bear the complete abdominal operation well. Much depends upon sound anæsthesia, rapid operating and good nursing. Nearly all the common accidents and deaths from hæmorrhage, tetanus and sepsis at the present time may be attributed to animal ligatures. Pure boiled silk and silkworm gut are the safest and strongest of all materials. Cleanliness, and everlasting vigilance in preserving it, are most essential.

In the discussion of this subject at the American Association of Obstetricians and Gynæcologists—

HAYD, Buffalo, believed in the necessity of evacuating pus when it could be easily reached, and in the course

of a week or two afterwards doing such a radical operation as might be necessary. Open treatment was an advantage in taking care of the later infections that occurred on the third to the sixth day from injuries to the bowel and other viscera. Better work could be done without than with rubber gloves; but for those surgeons, and there were some, who could not sterilise their hands, gloves were essential. He preferred catgut to silk and silkworm gut.

GOLDSPOHN, Chicago, said that to include under the heading of imperfect surgical work the vaginal drainage of pelvic abscesses, was a mistake. He believed in the use of gloves for septic cases only, so that the hands should not become infected.

MORRIS, New York, said that gloves were a great drawback in separating adhesions, but that they were a necessity for men whose hands were habitually moist, and who therefore carried actively proliferating colonies of bacteria in their epithelium.

BALDWIN, in reference to the establishment of so many small hospitals, pointed out that it was far better not to appoint a permanent staff.

BONIFIELD, Cincinnati, approved of vaginal drainage for certain cases of pus in the pelvis. He thought catgut preferable to silk, and that gloves should be used in septic cases.

BROWN, St. Louis, approved of vaginal drainage for pus, and referred to nineteen cases he had reported.

RICKETTS, Cincinnati, thought that silk was to be preferred to animal ligatures.

CARSTENS, Detroit, believed in vaginal drainage for pus. The question of rubber gloves largely depended upon what work a man did other than his abdominal surgery; if he was treating all kinds of cases, septic and infectious, then gloves were imperative, and even then his mortality would be higher than it ought to be. He believed in silk only for intestinal surgery, otherwise he relied upon catgut.

PRICE, in reply, referred especially to the advantages of operating in the early morning when cleanliness and mental condition were at their best.

J. F. J.

ABDOMINAL OPERATIONS DURING PREGNANCY.

WORRALL, Sydney (*Australian Med. Gaz.*, 1903, December 21), is inclined to think that operations during pregnancy are actually safer than at other times, owing to the increased resisting power of the patients. After fifteen such operations recovery had, in every case, been not only complete but easy, and apart from the cases in which the uterus was removed, premature delivery occurred in only two. Two were enucleations of myomata complicating pregnancy; four were hysterectomies for myomata complicating pregnancy; four were ovariectomies during pregnancy (of these, two were dermoid cysts, one being a dermoid complicating pregnancy in one horn of a bicornate uterus); two were vaginal cœliotomies for acute abdominal symptoms caused by adhesions of a retroverted gravid uterus; one was abdominal section for pelvic peritonitis complicating pregnancy of two months' duration and due to gonorrhœal infection prior to conception; one was abdominal section for pelvic abscess and bilateral pyosalpinx complicating pregnancy of the second month. These latter two are of great interest, as proving that even very serious pelvic lesions cannot be held to be an inseparable bar to pregnancy. He would urge that every practitioner engaged to attend a confinement case should make a point of carefully examining his patient and ascertaining whether anything abnormal exists; by doing so he will often spare himself the disagreeable surprise of discovering during labour or the puerperium a pathological condition the non-recognition of which beforehand may have imperilled his patient's life, and caused loss and anxiety to himself. In myomata complicating pregnancy and producing symptoms, or so situated as likely to cause obstruction during delivery, operation should be undertaken at once, regardless of the viability of the child. The mother's interests should be paramount, and by delay there is greater danger for her owing to probable complications, such as interference with the circulation of the tumour, its necrosis, and consequent sepsis or infection of the tumour from abortion.

OVARIOTOMY DURING PREGNANCY.

HEIL, Darmstadt (*Muenchener m. Wchns.*, 1904, No. 3), supplements the statistics collected by Orgler and Graefe

with 25 cases from Thomas's article (*Ibid.*, 1903, No. 10), 36 collected by himself and 5 personal observations, arranging his material in the tabular form adopted by Orgler and continued by Graefe, and numbering his additions from 176 to 241. With legitimate exclusions he finds that the mortality due to the operation was barely 2.1 per cent., which he takes as a proof that the prognosis of the operation is not unfavourably affected by the existence of pregnancy; pointing out that an examination of the cases that did terminate unfavourably shows that in each individual case the prognosis depends entirely upon the condition of the ovarian tumour complicating the pregnancy. In regard to the prospects of the fœtus, he finds that (in 231 available cases) the pregnancy was interrupted in 45 or 19.47 per cent., closely corresponding with Olshausen's approximate estimate of 20 per cent. In the 64 available cases of his own additional 66, omitting an abortion of a fœtus maceratus twenty-four hours after operation, and a birth of a healthy child on the fourth day after ovariectomy in the ninth month, however, there were only six interruptions, that is in 9.37 per cent. of the cases. He concludes that whenever a pregnant woman complains of abdominal pain or other irregular trouble in the genital sphere, she should undergo thorough examination, and if the diagnosis sways between extrauterine pregnancy on one side and intrauterine pregnancy complicated by an ovarian tumour on the other, cœliotomy is directly indicated; even those surgeons who do not admit the possible ovarian tumour to be a strict indication for operation, will admit that ovariectomy is a far less dangerous matter for the woman than the neglect of an ectopic pregnancy and all the perils connected therewith. This view is all the more important for those patients who, in necessity (rupture of the sac) would be far from suitable assistance. The tube on the side of the tumour should, if possible, be left, to avoid traction on the uterus, &c. In Heil's opinion Pfannenstiel's standpoint is the only one justifiable, "to operate directly the diagnosis of an ovarian tumour complicating pregnancy is established."

ABDOMINAL TUMOURS IN THEIR RELATION TO THE COLON.

BALDWIN, Brooklyn (*Amer. Jour. Obst.*, 1903, Nov.), advocates the use of the colon in the diagnosis of abdo-

minal diseases. Usually the colon can be accurately outlined by percussion, but if necessary it can be distended with air forced in by an ordinary bulb syringe, and its outline can then be determined with absolute certainty. The parietal attachment of the mesocolon must be borne in mind. Tumours originating in the uterus and ovaries will be outside the colon. Tumours of the kidney develop between the layers of the ascending or descending mesocolon, and the colon will be found in front of the tumour or towards its inner side. A movable kidney may enter the central area and have the colon outside it, but when the patient is recumbent the tumour will slip back into its original position. A tumour of the spleen must be outside the descending colon, but if extremely large may override it completely. Enlargements of the liver or gall bladder either crowd the colon downwards or override it. The gall bladder, when elongated, may hang down in front of the colon for a considerable distance. Tumours of the stomach push the transverse colon straight downwards. In 95 per cent. of tumours of the pancreas the swelling is above the transverse colon.

J. F. J.

FIBROMYOMATA OF THE VAGINA.

POTAL, Lille (*Revue de Gyn.*, tom. vii., part 2), in connection with a personal observation and a case of Prof. Dubar's, discusses the literature of vaginal fibromyomata, 160 cases of which have been published. They may grow at any time of life, but 84 per cent. occurred during child-bearing age. The majority have pedicles, but some are broadly attached and occasionally without any capsule; the heaviest recorded weight was 5.25 kilogrammes. The tumours were multiple in 8 of 120 cases and uterine fibromata coexisted in 3 or 4; occasionally vaginal fibromata are tumours which have escaped from the uterus, as may be known by the pedicles passing from them to the portio. The seat of the tumour in 55 of 120 cases was on the anterior, in 26 on the posterior, vaginal wall, in 10 it was on the right and in 9 on the left side. According to its position it caused various displacements, cystocele, rectocele, dislocation of the urethra or clitoris, &c. The growth of these tumours, though generally slow, is greatly accelerated by

pregnancy. Histologically, only six of the tumours were purely fibromatous. One tumour observed by Tédenat, containing striped muscular fibres in the midst of the nodules of connective tissue of the fibroma, may be considered as a transition form approaching the rhabdomyoma of Kaschewarowa, hitherto looked upon as a teratoma. According to Ranvier, cross striping of the muscular tissue of the genitalia is not uncommon in men, hares and dogs, and Kaschewarowa's tumour must be considered to be a myxomatous fibroma. The prognosis of vaginal fibromyomata depends entirely upon asepsis; extirpation is the only treatment, and care must be taken to avoid projecting portions of the bladder and rectum, and to secure the vessels of the pedicle. The removal of tumours with broad attachments is a matter of much difficulty. Obstetrically such tumours may necessitate the performance of Cæsarean section.

FIBROMATA OF THE ABDOMINAL WALL.

FAEHNRIK (*Thesis*, Breslau, *Zentralb. f. Gyn.*, 1903, No. 41), after a laborious and far-reaching review of cognate literature, has described seven instances of pure fibromata of the abdominal walls, the largest of which weighed 4,500 grammes. Two of the tumours originated in the anterior and one in the posterior sheath of the rectus; one in the superficial fascia, one in the internal oblique muscle, and two from the deep fascia. He considers their development to be due most probably to muscular rupture from injury or infection, and that their growth is promoted by gestation. All the seven women were operated upon in the Royal Frauenklinik and were discharged cured.

ON THE CALCIFICATION OF FIBROMYOMATA OF THE UTERUS, ESPECIALLY IN REGARD TO THE CO-EXISTENCE OF PYOSALPINX.

LOMER (*Thesis*, Berlin, *Zentralb. f. Gyn.*, 1903, No. 41) holds that the calcification of a myoma is due to a deficient supply of blood, and that arteriosclerosis may be a factor in its occurrence, pointing out that the condition is seldom met with except in women beyond the age of the meno-

pause. He refers to two cases published by Strassman, in one of which the condition was one of incrustation, in the other there was a calcareous shell several millimetres thick. In each of them there was also pyosalpinx; in one antecedent chronic abdominal inflammation had been present for a long time, in the other there had been puerperal infection.

MALIGNANT MYOPERITHELIOMA OF THE UTERUS, AND THE
MALIGNANT DEGENERATION OF UTERINE MYOMA.

SIGMUND GOTTSCHALK, Berlin (*Zeitschrift f. Geb. u. Gyn.*, Bd. lii., Hft. 2), reports the following as the first reported case of malignant myoperithelioma of the uterus. In a woman aged 51 some just perceptible myomatous nodules of the uterus, in the course of three months, developed into a tumour reaching as far up as the navel. She had, at the same time, a profuse reddish watery discharge. Gottschalk diagnosed a malignant degeneration of the myoma, performed an abdominal total extirpation, and the woman made an uninterrupted recovery. He gives a detailed pathological anatomical description of the specimen removed, and of the histological examination of the tumour, with explanatory illustrations. Numerous submucous interstitial and subserous myomata of various sizes were found in the uterus; one of the larger nodules situated in the anterior wall, was covered on the side towards the uterine cavity with papillary excrescences which had destroyed and replaced considerable portions of the tumour and of the mucosa of the anterior uterine wall; the mucosa of the posterior wall was intact. There was a quantity of soft friable vegetation, reddish-grey in colour, in the cavity of the uterus.

Gottschalk points out that the elements of the adventitia of the several blood-vessels must be accepted as the point of origin of the new growth, and especially those known according to Eberth as the perithelia; that is to say, cells which lie like epithelia at certain spots on the outside of the vessels. As the new growth contained not merely capillaries but vascular trunks with well developed muscularis, it may be concluded that the tumour did not originate in the superficial layers of the mucosa; as points of origin, only the vessels of the deepest layers of the

mucosa, or those of the involved intramural myoma, can come into question. The parenchyma of the deeper parts of the myoma exhibited an alveolar structure resembling carcinoma, indicating a more advanced stage in the development of the new growth, while in the more superficial layers of the tumour the primary purely perithelial type of structure prevailed. This fact indicates that the new growth found its origin in the vessels of the myoma immediately beneath the mucosa, and that it should therefore be properly termed "myoperithelioma uteri malignum."

SARCOMATOUS TRANSFORMATION OF MYOMATA.

CULLEN, Baltimore (*Journ. Amer. Med. Assoc.*, 1903, October 24), holds that myomata showing sarcomatous degeneration are developed either from connective tissue, leading to spindle, or round-celled formation, or from the muscular tissue of the uterus. Clinically, myoma of the uterus, after being dormant, possibly for several years, sometimes becomes the seat of rapid enlargement. If the growth is submucous, portions may be expelled from time to time, and there will then be an offensive discharge, with cachexia. On the basis of recent investigations he lays down the following rules for operative intervention: (1) Whenever either sarcoma or carcinoma coexists with myoma, panhysterectomy is imperative—not amputation through the cervix; (2) bisection of the uterus is contra-indicated where there is a possibility of a malignant growth developing in or associated with the myomatous uterus; (3) in every case of hysteromyomectomy it is advisable for an assistant to open the uterus immediately on its removal and determine whether carcinoma of the body exists, or if the myoma has become sarcomatous. If malignancy is detected the cervix can then be removed without delay.

SUPRAVAGINAL HYSTERECTOMY.

LAUWERS (*Bull. Soc. Belge. Gyn. Obst.*, t. xiv., No. 2) records 200 supravaginal hysterectomies for fibromata with six deaths, a mortality of 3 per cent. He met with the following complications: Calcareous cystic or cavernous degeneration of the tumour in 8 cases, necrosis in 4 and infection in 1; cancer of the corpus in 2 instances, sarcoma

in 3; intraligamentary myomata in 12 cases, adhesions in 10; putrefied mole in two, pregnancy in 4 women; 1 case of twisted pedicle, 2 of ascites and 2 of peritonitis. The adnexa were diseased in 21 instances, including cancer of the ovary 1, voluminous ovarian cysts 3, dermoid cysts 2, ovarian hæmatomata 12, hydrosalpinx 2, pyosalpinx 1. There was extreme anæmia in 41 cases, anæmia with jaundice in 2, phthisis in 2, slight albuminuria in 4, and paroxysmal tachycardia in 1. In spite of these complications he was able, with a few modifications adapted to the special conditions encountered, to carry out the following principles of operation. After opening the abdomen in the Trendelenburg position he drew the tumour through the incision, ligatured and separated the appendages by an incision outside the ovaries, united the anterior extremities of the broad ligaments by an incision, dissected an anterior flap of peritoneum and separated the bladder from the uterus, tied and divided the uterine arteries, and then amputated the uterus above the insertion of the vagina and removed it with the tumour. After stitching together the anterior and posterior lips of the cervical stump, he passed a continuous suture through the edges of the broad ligaments so as to bring them together over the stump and "peritonise" the whole of the raw surface in the floor of the pelvis.

P. Z. H.

VAGINAL TOTAL EXTIRPATION OF THE UTERUS FOR MYOMATA.

LEOPOLD AND EHRENFREUND (Chrobak's *Festschrift: Zentralb. f. Gyn.*, 1903, No. 49) in this article supplement the 100 cases of vaginal total extirpation of the uterus for myomata performed in Leopold's Klinik since 1887, and already published, with fifty-one additional ones; the history of each case is given, and in every one the anatomical condition of the uterus was investigated.

In all cases the condition of the circulatory system was ascertained before operation, and those who had lost much blood received copious subcutaneous injections of salt solution. Leopold attaches very great importance to proper preparation for the operation, especially to improving the general condition of the patient. The

operation was only performed for uteri not exceeding the size of a child's head. The most important deductions from the analysis of the cases are : (1) The mortality of total vaginal extirpation of the myomatous uterus in the 151 cases has been 3·7 per cent. The indications were strictly considered, and the ligature method was used almost exclusively; (2) except in four instances all the women (102) that have been traced are well up to their work and thoroughly contented with their general condition. In none of these women did the operation leave any consequences detrimental to health; (3) it is certain that in spite of conservative methods of operation, that is, in spite of the preservation of one or both ovaries, and apart from any age limit, omission symptoms appeared in connection with the removal of the uterus, but they were not serious enough to interfere with good general health.

ON THE MALIGNANT DEGENERATION OF THE CERVICAL STUMP AFTER SUB-TOTAL HYSTERECTOMY, WITH SOME REMARKS ON TOTAL AND SUB-TOTAL HYSTERECTOMY AND MYOMECTOMY FOR FIBROIDS.

RICHELOT (*La Gynécologie* and *La Semaine Médicale*, 1903), in a paper based upon three personal observations of malignant degeneration of the neck of the uterus after sub-total hysterectomy for fibroma, and a dozen cases of the same kind which he has found published, draws the conclusion that sub-total hysterectomy for fibroma is an operation that should be abandoned, because, while as an operative proceeding it offers no particular advantages, it leaves the patient exposed to post-operative consequences of the most serious kind. He does not find sub-total hysterectomy easier than total, though the latter takes a little longer to perform. Nor is the former a safer proceeding. There is, in fact, no difference in the immediate prognosis between the two methods, and the sub-total operation should be reserved for exceptional cases, such as those in which, owing to uncertainty about the anatomical relations of the uterus, bladder or ureters, the performance of the complete operation is exceptionally difficult, or in which, owing to the thickness of the abdominal wall or the fixation of the uterus, the operator can only reach the

pelvic floor with the tips of his fingers. The stump of the cervix is a source of real and permanent danger to the patient, as it may at any time become the seat of epithelioma or carcinoma, and such degeneration is not improbable, for the fibromatous uterus is not merely a possible field for malignant growths, but their special province.

Disordered nutrition leads to various forms of fibromatous degeneration of the uterus, constituting an unbroken chain from the small sclerous organ to the gigantic one without any defined tumour, and including the fibromatous uterus properly so-called, in which the neoplasm, though distributed here and there in lobes and lobules, has invaded the entire organ. Both corpus and collum, both parenchyma and mucosa, are affected, and while sclerosis of the parenchyma, of which the fibrous lobule is but one example, may, without breaking any histological law, degenerate into a growth of the same species of connective tissue and become a sarcoma, the hypertrophic glandular metritis met with in all fibromatous uteri is neither more nor less than the benign adenoma of the Germans; and who does not know that, by metatypical involution, adenoma often changes into epithelioma? Richelot insists that the serious nature of fibromata must be recognised, and that every such tumour is a ground for continual anxiety and indicates radical treatment. As, in his opinion, the more glandular and epithelial tissue left behind the more danger remains in the future of the patient, myomectomy is less justifiable than sub-total hysterectomy, which Richelot nevertheless admits may be adopted in exceptional cases. He also recognises the utility of preserving the uterus, without considering future possibilities, in all cases where the organ is worth it; for instance, when in a young woman who may bear children a myomectomy can be done without excessive mutilation.

This communication and the discussion arising from it occupied the Société de Chirurgie for six meetings in October, November and December, 1903. MONPROFIT, of Angers, adhered to total hysterectomy for fibromata as an operation to which he was accustomed, which in the great majority of cases offered no greater difficulty, and which gave him as good results as he could expect from sub-

total hysterectomy. But, among all the other distinguished men who spoke, opinion was practically unanimous that *the sub-total operation was not only much easier and much shorter, but also much more benign, than total hysterectomy*. POZZI took this view, and as regards benignity mentioned that in four years he had had three deaths after sub-total hysterectomy in fifty-seven cases, and four in forty-two of total hysterectomy, the mortality due to the operation being respectively 5.25 and 9.50 per cent.

The following opinions also prevailed :—

The association of fibromatous and cancerous processes is merely coincidence, and moreover very rare (POZZI); their connection is purely theoretical and unsupported by any statistical evidence.

Cancerous degeneration of the stump was quite exceptional (FAURE), had never been met with by POIRIER, SEGOND, RICARD, ROUTIER, SCHWARTZ, or by LEGUEU, who pointed out that after the removal of the corpus the collum underwent atrophy; the fear of such degeneration was a vain one (QUÉNU), and most surgeons guarded against it by destroying the cervical mucosa with the cautery (MONOD, DELBET).

Total hysterectomy was indicated by such affections of the cervix, or adnexal disease, as demanded free downward drainage (LEGUEU, POTHERAT, DELBET); it was an easy operation when the tumour was freely movable, but far otherwise when the adnexa were diseased, as Quénu had found them to be in 50 per cent of his cases of uterine fibroids.

POTHERAT invariably preferred vaginal to abdominal hysterectomy when it was possible to remove the uterus by that way, otherwise he adopted the sub-total operation.

POZZI said that in sub-total hysterectomy he divided the cervix by a V-shaped incision so as to leave an anterior and a posterior flap which he united by a triple layer of sutures, afterwards closing the peritoneum over the stump by a continuous suture. QUÉNU, SCHWARTZ and RICARD held that the section was in no instance absolutely transverse but downwards and from without inwards on each side, so as to approximate to the V-shape of Pozzi, but in the sagittal direction.

Enucleation, most of the speakers opined, should be

reserved for tumours either solitary or limited in number, in young women with sound adnexæ. ROUTIER and SCHWARTZ thought it inapplicable when it involved opening the cavity of the uterus; but SEGOND considered vaginal or abdominal myomectomy to be the ideal operation.

TUFFIER declared that it was only when myomectomy was contraindicated that hysterectomy should be thought of. The size of the tumour was hardly ever a contra-indication, as he had exhibited specimens weighing 800 and 1,200 grammes removed by enucleation. The *number* of the tumours was more important, though from a single uterus he had removed seventeen, situated in various positions and requiring numerous incisions; nevertheless, when enucleation would involve an excessive mutilation of the uterus one should not hesitate about performing hysterectomy. In regard to the *age* of the patient, considering the importance of the womb not only in preserving the functions of menstruation, and so maintaining the balance of the general health, but also the part it plays mechanically in the anatomy of the pelvis, even though conception is not to be hoped for, if the endometrium is beyond suspicion, one should not hesitate, even at the approach of the menopause, or for a few years after it, to enucleate a solitary growth which can be so dealt with easily. After the menopause, especially when there is more than one tumour or the slightest doubt as to the integrity of the mucous membrane, hysterectomy is, as a rule, the proper proceeding.

The relation of the fibromata to the uterine parenchyma is much more important in regard to myomectomy than their size, position or number. Encysted fibroids, whether adherent to their sac or not, are easily enucleated, but diffuse tumours without any definite anatomical limit, demand hysterectomy. Some tumours are associated with a general fibro-sclerosis of the uterine parenchyma, and the uterus is then of a woody consistence, incapable of suture after myomectomy, and will not undergo the involution which usually follows the *accouchement* of fibroids. It is better to perform sub-total hysterectomy than to attempt to save such uteri. In any case, when suspicious changes have been found by microscopical examination of curetted portions of the uterine mucosa, total hysterectomy is clearly indicated.

Recurrence after enucleation, perhaps in consequence of the alteration in the blood supply due to the sutures and ligatures, is very rare; Tuffier has never met with it, and his pupil Zwibel found that in 562 cases of enucleation it only occurred in 0.75 per cent.

RICHELOT, in his reply, pointed out that he had never asserted, as several of the speakers seemed to suppose, that either sub-total hysterectomy or myomectomy should be altogether abandoned, but he could not admit that to anyone accustomed to the operation total hysterectomy offered difficulties appreciably greater than the sub-total proceeding. He detailed his own method and declared that the differences in the technique of it, and of the sub-total operation as practised by its partisans, seemed to him very unimportant. He held to the opinion that uterine sclerosis, of which fibromata were merely incidental modifications, was an initial stage preceding cancerous degeneration, and therefore that total hysterectomy was the only logical means of opposing it. Cancerous degeneration of the stump was not a chimera; taking the cases mentioned in the course of the discussion and others that had come to his knowledge since the reading of his paper, he had a series of nine observations to confirm him in his opinion. He insisted that without being much more difficult or dangerous, total hysterectomy offered a security that sub-total could never afford.

AN UNUSUAL FORM OF POLYPUS IN THE CAVITY OF A MYOMATOUS UTERUS.

REGNIER (Chrobak's *Festschrift, Zentralb. f. Gyn.*, 1903, No. 46) reports: A woman aged 57, who had for a long time been under treatment for myoma without giving any indications for operation, and in whom the menopause had taken place in her 53rd year, complained that she had for a year back suffered from genital hæmorrhage, at first slight but latterly profuse in amount. The uterus was larger than a man's fist and deformed by the presence of multiple myomatous nodules in its surface, and on the suspicion of malignant changes in the endometrium total vaginal extirpation was performed. There were no suspicious changes in the portio. When opened, the cavity of the uterus was considerably enlarged and was com-

pletely filled by a pendulous polypoid tumour, the lower pole of which extended to the internal os and which was connected with the uterine wall merely by a very short pedicle, 8 mm. thick, attached to the fundus a little below the right cornu. The tumour was throughout a nodular structure, but almost the whole of its surface was of a peculiarly warty appearance, as if the investing mucous membrane had taken a papillary form; the growth was taken to be a myoma in sarcomatous degeneration. The well-marked papillary form of the surface was most distinctly seen in a microscopic section. The papillary growths on the free surface were covered by a simple layer of tall cylindrical epithelium, the cells of which in some places were transformed into pitcher or more cubical or flattened form. No atypical epithelial proliferation was discernible. The limit between the epithelial investment and the proper tissue of the tumour was everywhere well defined. In other respects the tumour offered the typical appearance of a fibromyoma.

UTERINE CARCINOMA AND VAGINAL OPERATION.

FLAISCHLEN, Berlin (*Zentralb. f. Gyn.*, 1903, No. 52), gives the results of 48 vaginal operations for uterine carcinoma performed by Ruge and himself. Four patients died from the operation, 20 remained free from recurrence, 17 still, after from 7 to 18 years, permanently cured, 3 died from intercurrent disease. The proportion of permanent cures therefore reached 34 per cent. Of the recurrent cases 16 died within two years of the operation, 3 in the third, and 5 not till the fourth and fifth years. Fleischlen insists that the success of any operative treatment depends chiefly on the early diagnosis of the disease, but that his statistics prove at all events that good permanent results can be obtained by the vaginal operation.

EXCOCHLEATION OF INOPERABLE UTERINE CANCER AS CARRIED OUT IN CHROBAK'S KLINIK, AND ITS PERMANENT RESULTS.

BLAU (Chrobak's *Festschrift*, *Zentralb. f. Gyn.*, 1903, No. 45) describes Chrobak's proceeding thus: After disinfection of the field of operation in the usual way, under

anæsthesia, as much as possible of the cancerous masses is removed with a large, sharp spoon, during which one guards against accident by frequently making an examination to see whether there is any danger of perforating the bladder or rectum or any thinned spots. Any small prominences in the cavity so formed are then abraded with a smaller curette, and any large ragged masses projecting are cut out with scissors. The cavity is then washed out, the wounded surface carefully dried, and then generally cauterised with fuming nitric acid, or, if there be much hæmorrhage, with Paquelin's instrument. It is then plugged with iodoform gauze, which is removed on the fourth day and the vagina is irrigated. To promote cicatrization, cleansing and contraction of the wound, and to minimise the discharge, pads of cotton wool soaked in tincture of iodine are introduced into the cancerous cavity every second or third day, and pressed well against its walls.

In the subsequent treatment cauterisation has to be repeated on the average every third or fourth month, and this is done with fuming nitric acid, or, more rarely, with a 10 per cent. alcoholic solution of bromine. To arrest hæmorrhage, if a repetition of the palliative operation does not seem indicated, a tamponade with iodoform gauze is employed. Malodorous discharge is checked by the introduction of charcoal and iodoform powder on a tampon, and by vaginal irrigation with permanganate of potash or creolin.

Between January, 1890, and June, 1900, this method was adopted in Chrobak's klinik on 408 women, 2 of whom died of sepsis following the operation. The disease affected the cervix in 116, the portio in 245, the corpus in 15, and both cervix and corpus in 2 instances. In 342 of the 406 cases subsequent enquiries were more or less completely answered. Of three cases of carcinoma of the portio, clinically typical, but not confirmed by microscopical examination, one died eleven years after the excochleation from cancer of the uterus, one has lived nine years and is quite healthy; the third is still alive after six years.

The carcinoma had been determined by microscopical examination in 328 cases, and in these the mean duration of life after excochleation was 252·3 days; when the disease affected the portio it was 317·6, the cervix 281, but for

corpus carcinoma only 158·5 days. Fourteen patients survived the operation more than three years; 8 (4 of whom were still alive) from three to four years; 1 between four and five years; 2 between five and six years; 1 ten years, and 2 (1 perfectly cured) for eleven years; the other died from recurrence—remarkably late—of the disease. Of these 14 cases, 12 were cancer of the portio, 2 of the cervix; 4 patients were over 60, 8 over 50, and 12 over 40 years old.

[Excochleation, when carefully carried out, may evidently be an excellent palliative measure; but without more details than appear in the abstract it is hard to understand that so many cases affecting the portio only should be deemed inoperable.]

CHORIONEPITHELIOMA.

V. ROSTHORN (Chrobak's *Festschrift*; *Zentralblatt fuer Gynaekologie*, 1903, No. 45), points out that though there is now little difference of opinion as to typical chorion-epithelioma being a peculiar form of tumour developed from the products of conception and, clinically and anatomically, occupying a definite position of its own, and that though the difference in the views of various investigators as to the origin of the syncytial elements were becoming less and less important, the explanation of atypical forms of the disease still presented the greatest difficulties.

As an instance of the kind he relates the following case: A married woman, aged 28, whose third and last child was three years old, had a year previously begun to suffer from atypical genital hæmorrhage, which persisted constantly for three months, ceased without treatment, and recurred six weeks before admission, very profusely, especially towards the end of that time. She was extremely anæmic and her urine showed a trace of albumen. On the left side of the entrance to the vagina there was a dark reddish-blue elastic nodule as large as a hazel nut, the surface of which was uneven and much ulcerated; it had no deep attachment, but moved freely with the mucosa. The uterus showed nothing abnormal though somewhat enlarged, but in the right broad ligament just below the insertion of the tube there was a longish tumour

hard to the touch. Adnexa and parametria unaffected. A diagnosis was made of thrombus or sarcoma of the vagina, and the nodule was extirpated by a sagittal perineal incision. Ten days later the patient became suddenly unconscious with symptoms of hemiplegia, and in the course of a few weeks the paresis increased and she expired under cachectic symptoms.

We give the essential results of the *post-mortem* examination, as they are of exceptional interest. In most various parts of the brain there were nodular tumours up to 2 cm. in diameter; so also in the liver. In the mesentery of the small intestine, 20 cm. above the ileo-cæcal valve, there was a hard mass 2.5 cm. across, encapsuled in the course of a vessel. In the fundus uteri there was a round, well defined nodule, 2.8 cm. in diameter, which reached the serosa, but was separated from the mucous membrane of the cavity by a layer of muscle 4 mm. thick. In the right broad ligament a sausage-shaped mass extended alongside the veins, which to the naked eye seemed to be a venous thrombus. The left suprarenal was changed into an elongated oval nodular tumour, $9.8 \times 6.4 \times 5.5$ cmm. in dimensions, attached and perpendicular to the left kidney, the peripheral structure of which was closely compressed nodules, while the central portion consisted of hard hyaline tissue with irregular clefts and chasms in it filled with blood; the peripheral nodules, dark red in colour, showed a reticulated structure, the meshes of which almost throughout resembled the round lumina of blood-vessels, and were apparently filled with clotted blood. The masses of tumour in the uterine wall, the suprarenal, the liver and brain, consisted entirely of hardish, friable tissue, the appearance of which in section was a network with spaces distended by fluid or clotted blood. The diagnosis of the pathological anatomist (Eppinger) was: Hæmangio-endothelioma glandulæ suprarenalis lat. sin. cum metastibus i. cerebrum hepar et uterus.

The histology of the new growths is given in detail with illustrative sketches and microscopical sections, but von Rosthorn abstains from giving any final decision on their significance. On the one hand the minute structure of the growths shows great resemblance to that of malignant chorionepithelioma, but on the other, certain spots,

especially towards the edges of the preparation of the vaginal tumour, the most characteristic for making a decision, coincide in a remarkable way as regards the regular arrangement of the parenchyma with certain forms of endothelioma.

v. Rosthorn considers that taking the prevailing theory into account, one would not hesitate on the basis of the macroscopic and microscopic appearances to accept the tumour formation, even in this case, for so-called chorion-epithelioma, and in favour of this, in the light of Marchand's researches, advances: (1) The presence of tumours in the uterus and vagina as suggesting a probable origin in the genitalia; (2) the peculiar hæmorrhagic character of the metastases with the extended formation of clots and thrombotic structures; (3) the structure consisting (where that structure is preserved in the vaginal tumour) of two forms of cells, of well marked syncytial masses and accumulations of epithelial elements of the same kind; (4) the appearance of peculiar large cells in the neighbourhood of the foci; (5) the mode of extension exclusively by the course of the blood; and (6) to a certain extent the clinical history, the rapid and fatal course, and extreme malignity of the disease.

According to the views now accepted, the fact that three years had elapsed since the last childbirth and that the anamnesis does not point to any abortion during that time, is no argument against chorionepithelioma; neither is the absence of any chorionic villi in the metastases, in which necrosis interfered with the recognition of the true structure.

On the other hand the extreme similarity of the new growth to certain forms of endothelioma, as already mentioned, cannot be set aside.

Pfannenstiel's theory of the genesis of the syncytium from the maternal endothelium, would be very useful for the explanation of one of these new growths, for he says that it is not the endothelium from the walls of the maternal blood channels, but cells that have been transformed into syncytium, that are the origin of new growths.

The size of the suprarenal tumour is remarkable. Of course, no conclusion can be drawn merely from the size of a tumour in comparison with that of another, as to

which has been the primary or secondary growth. Eppinger, however, insists that the primary new growth in this case was in the suprarenal.

Since the genesis cannot be determined and the histological structure is partly that of chorionepithelioma, and in places resembles that of a hæmoangio-endothelioma, the six points of Marchand's teaching above-mentioned may occur in endotdeliomata, and no definite strict distinction can be drawn.

TRANSPORTATION OF CHORIONIC VILLI AND ITS RESULTS.

VEIT, Erlangen (*Zentralb. f. Gyn.*, 1904, No. 1), attributes a great number of normal and pathological changes in pregnancy, which appear to depend on the reception of chorionic villi into the tissues, to the transportation of such villi. As instances of such changes he mentions enlargement of the bed of the ovum, placental polypi, placental adhesions, thromboses of the serotinal veins, premature detachment of the placenta, destructive hydatid moles and malignant chorion epithelioma, and, finally, pregnancy kidney and eclampsia. He therefore recommends as the practical outcome of his belief, the most painstaking cleanliness in conducting cases of abortion or hydatid mole, and even in the examination of any travelling and bleeding woman, in order to guard against the accession of germs to the villi in course of transportation.

OVARIAN GRAFTING.

MORRIS (*Amer. Jour. Obst.*, 1903, Dec.) says that though when an ovary is removed from one animal, and transplanted into another animal of the same kind from which the ovaries have been removed, the tendency is for the grafted ovary to undergo a degenerative process, it may, for several months, furnish ova and internal secretion, but at the end of a year it will undergo fatty degeneration; but when ovaries are removed from an animal, and then replaced at some points near to, or even at a distance from, their original site, the tendency is for the ovary to continue its functions of developing ova and of furnishing its internal secretion. In cases of pyosalpinx, therefore, in which it is necessary to remove the ovaries

and tubes *en masse*, part of a fairly good ovary can be placed in warm saline solution until the rest of the work is completed, and can then be grafted partly beneath the peritoneum and near its original site before closing the abdomen. The segment of ovary is inserted through a slit in the peritoneum in such a way that the raw surface of the ovary is subperitoneal, where it can be nourished by the lymph circulation until new capillaries can be formed for its support. Part of the normal periphery of the ovary is allowed to protrude into the peritoneal cavity, so that the ova may escape.

J. F. J.

THE CONDITION OF THE BLOOD IN OVARIAN CYSTS.

POZZI and BENDER (*C. R. Soc. Obst. Gyn. Pæd.*, 1903, July), from the examination of the blood of twenty-three women with ovarian cysts, have formulated the following conclusions: (1) In the majority of cases it is possible by examination of the blood to distinguish an innocent from a malignant cyst of the ovary; (2) if the number of red corpuscles is normal and the proportion of leucocytes from 6,000 to 8,000, the cyst is of a benign character; (3) the presence of a moderate degree of leucocytosis with a normal or nearly normal proportion of red corpuscles is not sufficient to indicate malignancy, as such a condition is common with voluminous and constant with suppurating cysts; (4) marked diminution of the red corpuscles associated with a leucocytosis of from 12,000 to 20,000 points to malignant degeneration, but the presence of anæmia is more significant than leucocytosis; (5) examination of the blood may give valuable indications as to prognosis: in two instances patients with marked leucocytosis and pronounced diminution of the red corpuscles, succumbed rapidly after operation, though there was no reason to suspect infection. It is well to mention that two of the twenty-three cases were exceptions to these conclusions; in one malignancy was indicated but could not be confirmed histologically, in the other the red corpuscles numbered 4,470,000, and the white 12,800, though the cyst removed was undoubtedly malignant.

P. Z. H.

THE SYMPTOMATOLOGY OF OVARIAN CYSTS WITH
TWISTED PEDICLES.

BIAGI, Rome (*Il Policlinico*, 1903, August), points out that (1) an acute onset of symptoms of incarceration may be succeeded by a slow but gradual remission of all symptoms; (2) when the first onset has not been so severe, the symptoms may for a long time remain at about the same degree of intensity; (3) a severe onset followed by a persistent and rapid aggravation of the symptoms indicates prompt operative interference. In either of the former types of attack the circulation of blood in the tumour may be slowly restored through collateral channels and the patient may feel comparatively well.

The symptoms of intestinal occlusion are not to be attributed to septic peritonitis, but to traction upon, and irritation of, the solar plexus. There is consequently paralysis of some of the loops of intestine or of circumscribed portions of them. Peritoneal infection, due to the *B. coli*, may supervene; at first the question is not one of such infection, but the possibility of its occurrence is, in all cases of torsion of the pedicle of ovarian cysts, an indication for operation, and the accidental coexistence of pregnancy is far from being any contraindication to surgical interference.

AN INSTANCE OF MULTIPLE OVARIAN EMBRYOMATA.

WULKOW (*Thesis*, Marburg, *Zentralb. f. Gyn.*, 1903, No. 41), from examination of two tumours in the Marburg Pathological Institute, formerly labelled "dermoid cysts," and affecting the ovaries of one individual, draws the following conclusions: (1) These tumours in every way correspond with those to which Wilms has given the name "embryomata;" (2) they were multiple in both ovaries, two on one side and four on the other; one is therefore justified in supposing that embryomata depend upon the pathogenetic development of ovarian germs. (3) The various tissues of the embryoma exhibit no departure from normal structure; one may therefore, in the same sense as Roux, look upon the process of development of these tissues as one of automatic differentiation. External conditions do not affect the process.

PAROVARIAL CYSTOMATA.

BENNECKE (*Thesis*, Goettingen, *Zentralb. f. Gyn.*, 1903, No. 41) found papillary growths in twelve out of sixty-five parovarial cysts, a proportion much larger than hitherto supposed. He points out that simple ovarian cysts contain no elastic tissue unless it be in the inner layer of their wall (*lamina elastica interna*); but that a strong layer of elastic fibres is found in the outer layer of the wall of parovarial cysts (*lamina elastica externa*); whereas in intra-ligamentary cysts, though they may have a *lamina elastica externa* with or without a *lamina elastica interna*, that external elastic layer is never so strong or well defined as in parovarial cysts.

ON REMOVAL OF THE UTERUS AND OVARIES FOR DOUBLE PYOSALPINX.

FREDERICK, Buffalo (*Amer. Jour. Obs.*, 1903, Nov.), after referring to the commoner symptoms associated with double pyosalpinx, such as pain, fever, emaciation, anæmia, sterility, dysmenorrhœa and menorrhagia, points out that early in the history the leucorrhœa is a prominent symptom, but that after a time the uterine mucous membrane seems to recover from its acute disease and the discharge becomes less. In the ordinary operation of removal of the appendages for this condition the pedicle is common to both tube and ovary, and hence all the tube is not removed, a diseased part, close to the uterus, remains, and the patient is not cured; cure by a subsequent hysterectomy is really due to the removal of the remaining diseased part of the tube. The symptoms of the enforced menopause, resulting from removal of tubes, ovaries and uterus, are the more intensified the younger the woman. After fifteen years' experience of the various surgical procedures and their results, Frederick is convinced that it is not necessary to remove anything except the organs distinctly diseased. In the pathology of the condition it is evident that the tubes do not drain, the two ends becoming closed, and the disease continues. The uterus drains freely, and in time recovers a mastery over the diseased process. With double or single pyosalpinx we must resort to complete exsection of the tube or tubes in order to arrest the

disease. Complete exsection means removal of the tube and cornu of the uterus down to the uterine mucosa, closing the V-shaped chasm in the cornu with catgut, and whipping over the free edge of the broad ligament, out of which the tube has been stripped. It is only in a small proportion of the cases of pyosalpinx operated on that there is any abscess of the ovary; when one is found it may be removed, or resection may be done, as, whenever possible, part of the ovary should be preserved. If the condition is tubercular in origin, then the uterus should be removed; but for whatever reason total hysterectomy may be performed, all the ovarian tissue possible should be preserved.

In the discussion of this paper at the American Association of Obstetricians and Gynæcologists—

MORRIS referred to the possibility of transplanting an ovary into the peritoneum; it would furnish its secretion, and the uterus would not degenerate. The transplantation must be in the same patient—if from one patient to another it would degenerate. The uterus should be saved whenever possible.

RUFUS HALL worked along conservative lines. In gonorrhœal cases, however, it was always right to remove both tubes; in others, if only half an ovary could be saved it should be.

DORSET believed in leaving an ovary after hysterectomy, but not when there was an abscess in it, as he had never seen an ovary with an abscess in it where he could draw the line of demarcation between the abscess and the healthy ovarian tissue. Whenever he had removed one ovary for an abscess and had left the other, apparently healthy one, alone, he had later on had to do a second operation.

BYRON ROBINSON said that a suppurating ovary could be opened, drained and saved. He had pursued this practice for years. For double gonorrhœal pyosalpinx, he was certain from experience that it was best to remove the uterus and both appendages at once.

GOLDSPORN insisted that pelvic cases should not be operated upon in an acute stage and in cases of double

pyosalpinx, not depending upon the appendix—it would then be possible to preserve the function of menstruation in 75 per cent. The tubes must be thoroughly removed. The uterus should be curetted and the pathological cervix should be amputated.

DUDLEY insisted on the importance of complete removal of the tubes, and said that the uterus should be retained, also as much ovary as possible. BLUME said that conservative work on the ovaries had been overdone; MURPHY that it made no difference whether the uterus was removed or not, and hence it should always be preserved.

J. F. J.

COEXISTING EXTRA- AND INTRAUTERINE PREGNANCY.

BICHAT, Nancy (*Revue de Gyn.*, Tom vii., Part 3), reports a case of a sextipara, aged 28, who from the sixth month, suffered from intense hypogastric pains, but went to term. She menstruated six weeks later, and four weeks later still was found to be suffering from a suppurated anti-uterine hæmatocoele reaching to her navel. This was laid open by abdominal section, and after tamponnade and the discharge of placental tissue she recovered in two months. The absence of any embryo, the firm adhesions, the blackened fluid contents, the definite statement that no coitus had occurred since her last confinement, oblige one to suppose that ectopic pregnancy had coexisted with intrauterine. Of such coexistence at least 49 cases have been recorded, but no acceptable theory of their etiology has been offered. The products of the two conceptions are generally of the same age, but differences have been met with of as much as two months. In 15 cases the nature of the adnexal tumour was recognised, indeed in some, parts of the foetus and the sounds of the heart were noticed. Rupture of the extrauterine sac occurred in 13, generally in the first three months, but once absolutely five days after the birth at term of the intrauterine foetus. In 15 instances abortion or premature labour ended the intrauterine gestation before the other. Differential diagnosis has to decide whether the uterus is really gravid or, owing to the extrauterine foetation, merely hypertrophied. In the cases in which data are available both

pregnancies went to term in 24·5 per cent.; the mortality of the intrauterine foetus was 65·3 per cent., that of the ectopic 96 per cent.; the maternal mortality was 45 per cent. (55 per cent., before 1880 and 36 per cent. since) In 23 cases operated on there were seven deaths (30·44 per cent.); 24 treated expectantly to the end were fatal to fifteen mothers (62·5 per cent.). Surgical intervention, which therefore appears to be necessary, will generally consist in laparotomy on account of the rupture of the extrauterine sac; the placenta may possibly have to be left behind, and then, if the intrauterine pregnancy be terminated by abortion, may retract and cause hæmorrhage. When extrauterine pregnancy is diagnosed in an early stage, the sac should be extirpated for the sake of the mother; after the seventh month interference depends on the life or death of the foetus. When both children live to term, the method of choice is laparotomy after spontaneous birth of the intrauterine child. Salpingectomy and Cæsarean section should be rejected.

CLINICAL NOTES UPON TUBAL GESTATION.

JACOBS (*Bull. Soc. Belg. Gyn. Obst.*, T. xiv., No. 2) makes the following remarks upon 82 operations for tubal pregnancy performed by him, in 17 instances under urgent symptoms of alarming intra-abdominal hæmorrhage after rupture of the sac; in the other 65, though there was no pressing indication, intra-abdominal hæmorrhage had taken place in 21 cases. Of the patients 56 were pluriparæ, 26 had not borne children, and 11 of the latter were among the urgent cases. As to age, 8 women were between 20 and 25, 19 more were under 30, 37 between 30 and 35, 16 over 35 and 2 others over 40. The pregnancy was in the left tube in 48, in the right in 34 instances. He has not met with any ovarian pregnancy. He operated once on an abdominal pregnancy at term; once at seven months (dead child); thrice in the fifth to sixth month; 24 times in the second to fifth month and 51 times in the second to eighth week, all the urgent cases being among these latter. There was nothing pathological to record about the previous condition of the genital organs in 31 of the cases; in 51 there was a history of old or recent disease of the uterus or adnexa. There were in 20 cases various co-existing pathological

conditions, viz., in one commencing cancer of the corpus, in 9 ovarian cysts, 3 of which were on the same side as the pregnancy, in 7 pyosalpinx on the opposite side, and fibromyomata in 3.

He performed 52 abdominal and 30 vaginal operations; 19 hysterectomies, 11 abdominal and 8 vaginal; 56 unilateral salpingo-oöphorectomies, 41 abdominal and 15 vaginal; in seven instances operation was limited to the opening and drainage of the pouch of Douglas. Four women died, but all the rest recovered. In one instance intraabdominal hæmorrhage occurred owing to a second tubal gestation exactly one year after a previous one. In the operation at term the child lived.

P. Z. H.

HÆMATOCELE OPERATIONS AND THE REMOVAL OF THE BLOOD.

FLATAU (*Muenchener m. Wchns.*, 1904, No. 1) in the Nuernberg Medical Society, expressed his surprise that no adherent of autotransfusion had replied to the challenge of Professor Zweifel (*ante*, p. 217), a fact that induced him to bring forward his own statistics, though the numbers were small. In the course of eleven years he had performed laparotomy upon nineteen women, on account of rupture of a pregnant tube with more or less severe hæmorrhage into the peritoneal cavity. In regard to the question suggested by Zweifel of the possibility of a peritoneal sepsis finding a home in the blood abandoned in the abdomen, two of the cases must be excluded, as the laparotomies were performed *in extremis*, and the women died without regaining consciousness, five and seven hours respectively afterwards. All the other seventeen recovered without interruption, and the most exacting judge could not wish for better results than 100 per cent. These cases prove that one may leave blood in the peritoneal cavity without much danger, certainly without wantonly hazarding the patient's life.

THE CORRELATION OF THE GERMINAL GLANDS AND THE DETERMINATION OF SEX.

HEGAR (*Muenchener m. Wchns.*, 1903, November 17, S. 2,017) in an interesting monograph published by Speyer

and Kaerner of Freiburg, i. B., attacks the "Dogma" of the correlative influence during embryonal development of the germinal glands upon the primary and secondary characteristics of sex, and also the view—which Virchow restored to general acceptance—that the removal of the germinal glands conferred on an individual the characteristics of the opposite sex.

In post-foetal existence, it is true, certain relations have been proved, inasmuch as artificial defects of the germinal glands due to operation are associated with changes in the system. These changes are exhibited in various ways and depend to a very great extent upon the age of the individual operated upon or castrated, but they consist chiefly in an approximation to the type of the opposite sex. In the few instances in which—as in the transformation in the breasts—this apparently takes place, an explanation may be formed other than merely that of correlation.

In regard to the special influence of the germinal gland upon the sexual type during embryonal existence, Hegar considers the abnormal combination of sexual characteristics to be negative evidence. The combinations in which primary and secondary sexual characteristics are met with in different individuals, are so varied that in view of such mosaic arrangements, apparently without the slightest design, the theory of an internal relationship of these characteristics among themselves is untenable. The association of such anomalies with other errors in development is far more noteworthy.

Hegar does not concur with Schultze in accepting the view that the sex of the ovum is determined before it leaves the ovary, but he is confident that the sex is either decided during fertilisation or is inherent in the germ, and also that the inheritance of anomalous combinations of sexual characteristics is a proof that such combinations depend upon the molecular structure of the germ plasm.

OSTEOMALACIA : DIAGNOSIS.

PAVIOT, Lyons (*Province Méd.*, xvi., No. 51-52, *Zentralb. f. Gyn.*, 1903, No. 90), describes two cases of osteomalacia which for several years were diagnosed as affections of the nervous system and attributed to amyotrophic lateral

sclerosis, meningo-myelitis, myelitis transversa, &c. The first case was proved to be one of osteomalacia by the *post-mortem* examination, the second he reports to be getting better.

THE CONDITION OF THE BLOOD AND RENAL SECRETION IN ECLAMPSIA.

ZANGEMEISTER (*Zeits. f. Geb. u. Gyn.*, Bd. 1., Heft 3), with the object of determining whether eclampsia is the result of imperfect action of the kidneys and therefore to be referred to uræmic intoxication, has investigated the condition of the blood and urine during pregnancy and labour, and also in women suffering from the nephritis of pregnancy, in order to ascertain the normal conditions, and ascertain the variations from such associated with eclampsia. The points investigated were, in regard to the blood, its alkalescence, number of corpuscles, chlorides, concentration of serum, freezing point, &c.; in regard to the urine, the acidity, phosphates, ammonia and chlorides (especially important being the proportion of chlorides to total salts). The results of the examination of the blood gave no support to the etiology of eclampsia being uræmic. The diminished alkalescence, the occasional increase in molecular density and increase in amount of the crystalloid nitrogenous material, are to be considered as accidental phenomena partly due to the diminished diuresis generally associated with the disease. The most remarkable peculiarity in the eclamptic blood is the enormous variations in the red corpuscles and the volume of the plasma. On the average the blood contained more red corpuscles, sometimes a very large excess. This hypererythrocythemia can only be explained on the supposition that the circulation is so seriously disturbed in this disease that the plasma escapes from the vessels. Renal anæmia was found to be a constant associate, but not the cause, of eclampsia. The most important etiological factor in the disease is, in Zangemeister's opinion, to be found in the uterus and its contractions.

MODERN THEORIES ON ECLAMPSIA.

WORMSER, Basel (*Muenchener med. Wchns.*, 1904, No. 1), writes: The discovery by Schmorl, Veit and others, of

foetal elements in the maternal system (syncytium and entire villi) suggested that further researches upon immunity and serotherapy might afford some sound explanation for eclampsia.

Every form of cell artificially introduced into the body acts as a poison (a "cytotoxine") and induces the formation in the blood of specific anti-bodies whose function is to dissolve the intruders (cytolysine). Owing to over-compensation more cytolysine is formed than is required, and an excess of cytolysine is left free in the blood.

There is no theoretical difficulty in applying these facts to the conditions of pregnancy and eclampsia. The villi, or elements of such, which find their way into the maternal blood by "deportation" (Veit, Poter) or embolism of syncytial cells, acting as poisonous, give rise to an excess of a specific "cytolysine" ready to neutralise any fresh immigration. If there is a want of balance in this process the excess may, it is suggested, cause morbid symptoms and bring on eclampsia.

Veit was the first to investigate this point practically, and to obtain a "syncytiolysin," which would dissolve placental elements *in vitro*, and in 1901 put forward the theory that eclampsia was due to a direct intoxication of the mother by placental elements.

Ascoli, in 1902, reported experiments that led him to suppose that eclampsia in woman depended upon the formation of an excess of syncytiolysin. This theory is *a priori* improbable, as it implies that an antidote against foreign cells acts as a poison on the system of the host; moreover, it is contrary to the results of practical experiment (Schmorl).

Weichardt, on the basis of some very fine and exact experiments, has founded a theory more plausible than Ascoli's, viz., that by the dissolution of the wandering placental elements an albuminous material is formed, "syncytiotoxine," which is poisonous to the mother; in normal pregnancy this poison is immediately neutralised by an adequate amount of antitoxine, but in cases in which the formation of this antitoxin is omitted or deficient, the poison prevails and gives rise to eclampsia.

We have, therefore, three theories on eclampsia, all built on the idea of cytotoxines; according to Veit it is an

excessive influx of placental elements into the maternal circulation which causes the syndromata of eclampsia; Ascoli holds the disease to be due to the excessive development of syncytiolysine by over-compensation, and Weichardt attributes it to a syncytiotoxine set free by the syncytiolysis and remaining unneutralised.

Veit's theory, fascinating from its simplicity, is invalidated by the fact that eclampsia cannot be induced by artificially saturating the blood of a gravid animal with the placental elements of one of the same species; the gravid animal supports the injection just as well as a male or non-gravid female.

Ascoli's experiments, even if they should be corroborated, do not prove his theory; at any rate he has not brought forward any evidence from pathological anatomy to show that the animals died from true eclampsia, and it is quite inexplicable why his cytolsine, if it were specific for gravid animals, though so very toxic subdurally, was without reaction when injected beneath the skin or into the veins. Certainly in eclampsia in woman one can suppose a toxine to work in no other way save through the blood.

Weichardt's theory is supported by three positive results, and for the present the most important outcome of all these experiments is the fact that, in a few cases, eclampsia has been induced artificially in rabbits.

Cognate researches have been made by Liepmann, starting also upon the basis of the deportation of villi and the more recent facts as to the formation of cytotoxine. He says: "Elements of the chorionic villi which enter the maternal circulation act like artificially injected albuminoid bodies and, therefore, lead to the formation of cytolsines, produced in excess, which must be open to detection in the maternal blood. If such detection can be effected by modern biochemical methods, for instance, by the examination of different specimens of blood, the serum diagnosis of pregnancy will be an accomplished fact." Liepmann found marked "praezipitin reaction" by adding serum from an animal treated with placenta to chorionic villi of one of the same species, but Weichardt and Opitz, who have tested his experiments, obtained the same reaction with serum from males and non-gravid females.

Wormser has himself been engaged in similar research for some time. He gives details of his very elaborate technique, and discusses the objections to which, owing to his circumstances, it may be open. Hitherto his results have been absolutely negative; other experimenters may have had similar experience, but their results, if so, have not found wide publicity, and he therefore gives his own.

As regards "*syncytiolysis in vitro*" obtained by Veit, Scholten and Weichardt and Opitz, but never by Liepmann, Wormser could never obtain it in test tube or hanging drop.

Weichardt induced eclampsia in three rabbits out of seven; repeating his experiments on five animals, Wormser failed to do so at all; he admits the number of trials is indecisive.

In repeating Ascoli's subdural injections upon six animals, Wormser found nothing to confirm Ascoli's views; and from numerous experiments he is led to believe that the "præzipitin reaction" obtained by Liepmann is by no means such a constant result of the addition of placental elements to specific serum as that author supposes.

TREATMENT OF ECLAMPSIA.

HOWLAND (*Virginia Med. Semi-monthly*, 1903, October 9) thinks that even in the most sparsely settled communities more care of the pregnant woman is not only desirable but possible. That toxæmia of pregnancy may usually be prevented, and that even when severe, if properly treated, it need not, in the vast majority of cases, result in eclampsia. That immediate forcible dilatation of cervix and extraction of the child is not always justifiable, but that its early delivery is desirable when it can be accomplished without serious injury to the mother. That the use of chloroform and morphine has been overdone, while the judicious use of chloral, normal salt solution, hot pack, nitro-glycerine, and veratrum viride has been too much neglected. That constant and intelligent attention on the part of the physician during the convulsions will cure a very large percentage of cases.

ANALGESIA IN OBSTETRICS.

V. STEINBUECHEL (*Ann. Gyn. Obst.*, 1903, Nov.) recommends the use of morphia and scopolamine hypodermically, in doses of 0.01 gramme of the former and from 0.0003 to 0.0004 gramme of the latter, that is to say, 0.15 of a grain of morphia and from 0.0045 to 0.006 of a grain of scopolamine; by this treatment he declares that the pain and suffering of the woman is much lessened, though her consciousness is not affected nor uterine activity diminished.

P. Z. H.

ACCOUCHEMENT FORCÉ FOR MORBUS CORDIS, BY MEANS OF FROMMER'S INSTRUMENT.

WALTER (*Zentralb. f. Gyn.*, 1903, No. 50, S. 1512, from *Hygiea*) reports: A primipara, aged 27, had suffered for a long time from serious heart disease; insufficiency and stenosis of the mitral valves. Compensation failed in the thirty-first and also in the thirty-third week, and in the thirty-fourth, after dilatation of the cervix with Frommer's modification of Bossi's instrument, the child was extracted by the high forceps, the woman being in slight narcosis for two minutes only during the extraction. The child weighed 2,700 grammes, was 47 cm. long and 33 round the head. During childbed there was some fever and one attack of cardiac insufficiency, but all subsequently went well, and the child thrived. Walter points out that when the cervix is not taken up, the branches of Frommer's instrument are too short. In this case in spite of fixation of the portio with bullet forceps, the instrument slipped out of the internal os.

CÆSAREAN SECTION.

OLSHAUSEN (*Zentralblatt fuer Gynaekologie*, 1903, No. 40), before a Cæsarean section, always gives two hypodermic injections of ergotin. His abdominal incision extends longitudinally from a point 6 to 8 cm. above the symphysis as far upwards as is necessary to allow the uterus to be brought out of the abdomen; then, having ascertained the seat of the placenta, the uterus is opened by a sagittal incision in front or behind, so as to avoid the placenta; the child is extracted and the placenta

removed, great care being taken not to leave any membrane adherent over the internal os. The wound in the uterus is closed by ten or twelve interrupted sutures through the muscular tissue, but not including either the mucosa or peritoneum, and by a continuous suture of the serosa over the former, which includes about one-third of the muscular wall. The abdominal wound is then closed.

Olshausen cannot admit that Fritsch's fundal incision has any advantages. The hæmorrhage can be limited in the longitudinal incision by avoiding the placenta and suturing the wound quickly. Palm's way of determining the seat of the placenta by the position of the round ligaments is not a certain one. Further indications will be found in the outward bulging and the development of the vessels of the uterine wall, especially the network of veins over the placental area, which is quite visible externally. The danger of air embolism and that of infection is comparatively slight. For sutures Olshausen recommends catgut, which has been submitted to a temperature of from 75 to 80° C., in an alcoholic solution of carbolic acid for fifteen minutes; the sutures will not give way if the knots are drawn tight enough.

In women who are not infected the danger of Cæsarean section is no longer great. It should as far as possible be performed at term. The child is not imperilled by the operation; it is often born, not asphyxiated, but apnœic; it has a skin of a bright red colour, reacts normally to stimulation, and its pulse is normal and frequent. It is also often affected by the morphia narcosis when such has been given.

In eighty cases operated upon during the years 1887-1902, the indications were contracted pelvis in sixty-two, and in the remaining eighteen various other circumstances, among which were eclampsia, carcinoma uteri, nephritis, myoma, vitium cordis, stenosis vaginæ, vaginofixation of the uterus; the mortality among the former amounted to 8 per cent.

The chief indication for Cæsarean section is contracted pelvis. In cases in which version and extraction, or the high application of forceps have to be considered as alternatives, Cæsarean section is a better proceeding, especially when chosen beforehand and proper arrangements made

for it. Symphyseotomy is not its equal, certainly not outside lying-in hospitals. Exact data about the conjugata vera afford uncertain guidance, as one cannot estimate the size of the child's head, or the force of the contractions to be expected.

THE LIMITATIONS OF CÆSAREAN SECTION.

ZINKE (*Amer. Jour. Obst.*, 1903, Nov.) analyses the conditions calling for Cæsarean section, and arranges his results in the form of a chart. He points out that the maternal and fœtal mortality—apparently still very high—is not due to the operation in itself, nor to the cause for which it is performed; but rather to long delay, previous futile attempts at delivery, lack of skill and experience of the operator, and imperfect preparation of the patient and her surroundings. He prefers Cæsarean section to induction of premature labour.

Cæsarean section at term, he considers, is absolutely indicated by: (1) A uniformly contracted pelvis, with a conjugata vera below $6\frac{1}{2}$ cm.; (2) an obliquely contracted pelvis if the contraction is very great; (3) a simple flat, rachitic pelvis, with a conjugata vera below $6\frac{1}{2}$ cm.; (4) tumours of the uterus, ovaries, or of the soft or bony parts of the pelvis, when their presence and situation is such that the child cannot pass through the parturient canal at all, or cannot do so without great danger to the mother, and when the tumour cannot be removed; (5) excessive ante flexion of the uterus, due to ventrofixation; (6) excessive retroflexion when complicated by fixation or impaction of the fundus; (7) advanced carcinoma of the cervix, vagina or rectum; (8) the death of the mother if the child be living; (9) extensive cicatricial contraction of vagina and cervix; (10) perforating injuries of the uterus.

Cæsarean section may, moreover, be necessary: (1) In a uniformly contracted pelvis, with a conjugate vera above $6\frac{1}{2}$ cm., or in an obliquely contracted pelvis, in consequence of the amount of the contraction, or of the size of child, and, for the same reasons, in a transversely contracted pelvis; or in a simple flat, rachitic pelvis with a conjugata vera above $6\frac{1}{2}$ cm.; (2) In threatened rupture of the uterus when forceps have failed or cannot be applied and version is too dangerous; and (3) in advanced

disease of the heart, lung, kidney, &c., in placenta prævia, in detached placenta, and in eclampsia, during the period of viability or at term, when the os is very rigid or the cervix elongated and hard, or when the attitude of the child is unnatural, rapid delivery is imperative, and shock as well as hæmorrhage to be avoided.

Cæsarean section is contraindicated for three reasons, and only in the absence of the absolute indication: (1) When the life of the mother or child (or both) has been fatally compromised; (2) when the child is dead; (3) when sepsis is present and general infection cannot be avoided.

In the discussion of this paper at the American Association of Obstetricians and Gynæcologists—

BACON, Chicago, said that in cases with cancer of the uterus he thought the vaginal Cæsarean section most applicable, and that it was ideal for cases of premature detachment of the placenta. In his opinion it was not necessary for placenta prævia, but it would be of great advantage in carefully selected cases of eclampsia. He did not approve of abandoning premature induction of labour in cases of moderate pelvic contraction.

DORSETT, St. Louis, reported a case of vaginal Cæsarean section for placenta prævia, and recommended this method of treatment.

CARSTENS, Detroit, approved of vaginal Cæsarean section in eclampsia with rapidly recurring convulsions, but thought that when a single convulsion was followed by a return to consciousness, premature slow delivery was the better treatment. He believed in free incision so that the risk of tearing the uterine wall beyond the incision might be avoided.

HALL, Cincinnati, agreed that the mortality following Cæsarean section was very great if there had been attempts at delivery by forceps, and the woman had been in labour a long time, and version and other manual manipulations had been tried.

BONIFIELD, Cincinnati, advocated the use of *veratrum viride* for puerperal convulsions. They could be controlled if only enough of the drug were given.

BALDWIN thought it would be less dangerous to a woman to make a rapid abdominal Cæsarean section than a vaginal one in cases with rigid cervix, small vagina and rigid perineum, and also in cases in which there was laceration extending into the uterine tissue or laceration of the vagina and perineum.

J. F. J.

VALUE OF VAGINAL CÆSAREAN SECTION.

STAMM (*Amer. Jour. Obst.*, 1903, Nov.), in pointing out the value of vaginal Cæsarean section, quotes cases performed by Duehrssen, Simon, Ruhl and Bumm, for eclampsia, for cervical cancer, for rigidity of cervix and vagina following a plastic operation, and for premature detachment of the placenta.

The indications for the operation are, according to Duehrssen, these: (1) Abnormal conditions of the cervix and lower segment of the uterus (carcinoma, myoma, rigidity, stenosis, partial pouch-like distension of the lower uterine segment); (2) conditions dangerous to the mother which may be removed or relieved by promptly emptying the uterus; affections of the heart, lungs and kidneys; (3) conditions of the mother where death is imminent and can be foreseen.

In pregnancy complicated with cancer, immediate vaginal section with subsequent extirpation of the uterus should be performed. The carcinomatous tissue must be curetted and cauterised: the bases of the parametrium on each side are then to be ligatured, the vagina completely separated from the uterus, the uterus pulled down and a median incision rapidly made in the anterior and posterior walls sufficiently large to extract the child. After the placenta has been removed the uterus is pulled down further, the peritoneum opened in front and behind, and the hysterectomy completed. STAMM reports two cases, operated upon by himself, for eclampsia with rapidly recurring convulsions. In the first the pregnancy had advanced to the seventh month, in the second to the eighth month. In both instances the operation was finished in less than half an hour, and in both the recovery from the eclampsia was good.

J. F. J.

ANTERIOR VAGINAL SECTION OF THE UTERUS.

RUEHL, Dillenburg (*Zentralb. f. Gyn.*, 1904, No. 2), who has performed nineteen vaginal sections of the uterus, makes some practical suggestions as to the technique of the operation. As most important he recommends that in the first place the cervix should be dilated as much as possible without cutting or excessive force, so that the wound in the uterus may be made as small as possible, and the exit for the lochia or any possible secretion be left perfectly free; secondly, that the loss of blood be kept as small as possible. When the operation is necessitated by troubles due to antecedent vaginal fixation, he recommends that the incision should be made through the cicatrix of the old wound. As regards the history of the operation, he shows that his anterior vaginal section of the uterus is identical with the hysterotomia vaginalis anterior described by Bumm in 1902, while he (Ruehl) performed his first Cæsarean section in the year 1895.

THE MECHANISM OF RUPTURE OF THE UTERUS AS SHOWN BY SOME EXCEPTIONAL CASES.

KNAUER, Graz (*Monats. f. Geb. u. Gyn.*, B. xvii., S. 1279), points out that it is by no means necessary that the laceration should take place from within outwards or *vice versâ*: the rupture may primarily affect the musculosa and thence extend inwards or outwards or in both directions. Case 1, the woman admitted with symptoms of impending rupture, was delivered by craniotomy. There was an extraordinary thinning of the lower uterine segment to barely 2 mm., but the internal surface was absolutely intact. There was a hæmatoma larger than a man's fist in the left broad ligament, by the side and in front of the uterus. Laparotomy on the fifth day *post partum*, on account of symptoms of peritonitis. The peritoneum near the symphysis, over the hæmatoma, was lacerated; no communication with the cavity of the uterus. Death apparently from peritonitis. The autopsy disclosed a primary isolated laceration of the musculosa of the lower segment (Dehnungszone) without simultaneous injury of the internal decidua surface or serosa. The tear in the peritoneum, which was transverse, while that in the musculosa was longitudinal,

was secondary in consequence of extreme distension by the hæmatoma. The rupture was probably due to a mass of caseated (tuberculous) glands which had prevented the engagement of the head.

Knauer also gives three cases of "incomplete external rupture," the worst form of spontaneous rupture of the uterus in labour. (Saenger, Brennecke, Spiegelberg.)

Case 1.—Post mortem.—Extreme general anæmia from hæmorrhage into the peritoneal cavity from numerous longitudinal tears, a few millimetres to several centimetres in length (longest $5\frac{1}{2}$ cm., 12mm. gape in the perimetrium and muscosa, the others only affecting the perimetrium).

Case 2.—Post mortem.—On the posterior surface of the uterus there were numerous tears in the serosa, many 1—2 mm., and a few 2 cm. long, the larger ones exposing the muscosa suffused with blood.

Case 3.—Post mortem.—The uterus much enlarged, exhibited on its posterior surface two parallel superficial lacerations, 4.5 and 5 cm. long, gaping to 0.5 cm. The muscosa beneath them was free from hæmorrhage.

All three cases were ones of premature detachment of the placenta; there must be some ætiological connection, most probably the extreme distension of the uterus suddenly caused by hæmorrhage into its cavity was the cause of the laceration of the perimetrium.

Knauer points out that whenever the uterus has undergone a sudden and extreme distension, symptoms of increasing anæmia without external bleeding, should lead to a suspicion of laceration of the peritoneal investment of the womb and internal hæmorrhage.

THE GYNÆCOLOGICAL RESULTS OF PLACENTA PRÆVIA.

RADTKE, Koenigsberg (*Zentralb. f. Gyn.*, 1903, No. 51), here discusses the various pathological conditions which may follow placenta prævia, a subject upon which, as a rule, little is said in manuals or text-books. His material includes 80 cases from the Koenigsberg Klinik, of which 35 came under his own observation. He found that 24 (30 per cent.) of these patients remained sterile, owing to endometritis, cervical catarrh, or salpingitis. Abortion occurred in 23 (28.75 per cent.), and was traced to endometritis and to laceration of the cervix. In subsequent

pregnancies 45 women (56·25 per cent.) bore viable children; 29 had normal labour; 6 premature; there were 5 cases of atonic hæmorrhage. Repeated placenta prævia occurred in 2 cases only (2·5 per cent.). The anomalies met with in the cases he examined himself included vaginal prolapse, retroflexion of the uterus, endometritis, cervical catarrh, erosions of the portio, lacerations of the cervix, parametritis, adnexal disease and tumours. The general system of the patients suffered, 57 being afterwards anæmic and 49 (61·25 per cent.) more or less unfit for their work. Radtke is therefore more than justified in saying that patients who have had placenta prævia should be kept under observation.

PATHOLOGICAL ANATOMY OF THE UTERUS AND PLACENTA.

KWOROSTANSKY (*Ann. Gyn. Obst.*, 1903, November), from the clinical history and microscopical examination of pathological sections of a large number of cases, draws the following conclusions: (1) Foetal elements, giant syncytial and also Langhans' cells, are to be found in the muscular tissue of all gravid uteri from the first to the tenth month, and even in the puerperal uterus, several weeks after labour; (2) under conditions unfavourable to the nutrition of the placenta, either general or depending upon cardiac or renal disease, uterine tumours or affections of the uterine mucosa, the foetal elements multiply profusely from the surface into the deeper layers of the musculosa, and may even penetrate the blood-vessels and be borne away to the lungs; (3) as a rule they produce a slight tumefaction and infiltration of the tissues upon which they are arrested, but no necrosis; (4) the diagnosis of syncytioma malignum is sometimes a very difficult matter and should not be made without careful study of all the anatomical elements of the uterus; it can only be considered certain in the presence of unconfined and formless proliferation of the foetal epithelium, in the form of a multi-stratified mass, in the muscular tissue itself, and not merely between the muscular cells and fascicles; it is further necessary to take into account the destructive action of the neoplasm upon the muscular tissue, the form and characters of the epithelium and the morphological changes in its structure, as in other cancerous affections

of the uterus ; (5) when, with proliferation of the foetal epithelium, masses of chorionic villousities are found in the blood-vessels, and intimately connected with the musculosa, consequent atony of the uterus may prove fatal, apart from any placental adhesion ; (6) normally, the influence of gestation does not lead to the formation of any new cells in the uterine musculosa ; the old cells become greatly hypertrophied without losing their physiological power of extension and contraction ; (7) the hypertrophy in the uterine musculosa is greater in cases of cardiac disease, nephritis, eclampsia and septicæmia than in uncomplicated pregnancy ; (8) the musculosa undergoes hyaline degeneration, fibrillary and molecular disintegration and vacuolisation, fatty degeneration, a normal process in the puerperium, also occurs,—these degenerative processes impair the extensibility and contractility of the musculosa and may lead to atony, or rupture of the uterus ; (9) the power of the placenta to adapt itself to various conditions in regard to space and nutrition, and by increased functional activity of its remaining parts to compensate for the loss of others that have been destroyed by maternal or foetal disease, is very remarkable,—in cases of infarction, the sound portions exhibit active proliferation of the epithelium and exuberant ramification of the chorionic villi. ; (10) the formation of infarcts with extravasation of blood in the placenta is constantly met with in cardiac and renal diseases, in eclampsia, and even in disease of the heart affecting the foetus. Separation of the placenta and the formation of hæmatoma between it and the wall of the uterus, is a cause of placental necrosis.

P. Z. H.

THE SO-CALLED WHITE INFARCTS OF THE PLACENTA.

SCHICKELE (*Ann. Gyn. Obst.*, 1903, October), after numerous researches, arrives at the following conclusions : Infarctions are examples of degeneration occurring during the cycle of a physiological process. In almost any placenta, at some stage or other of its development, certain disturbances in the circulation in the intervillous spaces may be observed, with secondary effects in the villosities of the decidua. The initial phenomena of disturbed circulation, with the results of retardation or stagnation of the blood,

are followed by reaction upon the villous epithelium and the decidua. Schickele suggests the term "fibrinous nuclei" as preferable to "infarctions," at all events for the more voluminous formations of the kind, on the ground that they are the result of a double process, the organisation of blood clots and analogous secondary changes in the adjacent anatomical elements.

P. Z. H.

ISOLATED RUPTURE OF THE SPHINCTER ANI EXTERNUM IN LABOUR.

ROSENFELD, Vienna (*Zentralb. f. Gyn.*, 1904, No. 4), reports, as analogous to the rupture of the levator ani without laceration of the skin or mucous membrane, two cases in which the rupture was confined to the fibres of the external sphincter of the bowel. The consequences were cystocele, prolapse of the posterior vaginal wall and relative incontinence of fæces. In each case the cystocele was repaired by Gersuny's operation. Catching up the bladder, the ends of the sphincter were then exposed and stitched together, and the proceeding concluded with typical posterior colporrhaphy. Both cases were cured.

PUERPERAL SEPSIS.

MONTGOMERY (*Amer. Med.*, 1903, November 7) says that in sapræmia the first indication is to remove all decomposing material from the uterus and vagina and to disinfect the entire genital tract as thoroughly as possible; all subsequent treatment is purely symptomatic. In septic bacterial infection, a much more serious condition, the seat of the infection should be located if possible. Montgomery has lost all faith in serum treatment, and thinks that hysterectomy to be any good at all must be done at once, and that as few (if any) men would assert that the uterus should be removed in every case of suspected sepsis, the procedure is only theoretically of service. Intravenous injections of germicidal agents such as sublimate or formalin have probably no more effect than a 1 per cent. saline solution.

NOTES.

WITH great regret we learn, while going to press, of the death, on February 14, at the early age of 48, of our distinguished Fellow, Dr. ROBERT MILNE MURRAY, F.R.S.E., Assistant Physician to the Maternity Hospital, Physician to the Western Dispensary, Assistant Gynæcologist to the Royal Infirmary, and Lecturer on Midwifery and Gynæcology in the School of Medicine at Edinburgh.

We have to record also the deaths of the following distinguished Obstetricians and Gynæcologists :—

Dr. GEORGE J. ENGELMANN, of Boston, Massachusetts, a Fellow of the British Gynæcological Society since the year of its foundation, died suddenly on November 17, 1903, at the comparatively early age of 55. He graduated as M.D. at Washington University in 1869, at Berlin in 1871, and as M.A.O. at Vienna in 1872. One of the most highly esteemed gynæcologists in the United States, he was widely known not only from his valuable contributions to the literature of his speciality, but also as keenly interested in the International Congress of Obstetrics and Gynæcology, of the permanent Committee of which he was an active member and of which he had been the Vice-President. He was at one time Professor of the Diseases of Women in the Missouri Medical College at St. Louis, and had been President of the St. Louis Obstetric and Gynæcological Society, Vice-President of the Southern Surgical and Gynæcological Association, and President of the Boston Obstetric Society, &c.

Dr. JAMES MCFADDON GASTON died at his home in Georgia, on November 15, 1903, aged 79. He served in the Confederate Army during the Civil war, and after some years in Brazil became, in 1883, head of the surgical department in the Southern Medical School at Atlanta.

He was President in 1895 of the American Academy of Medicine, and in 1896 of the Southern Surgical and Gynæcological Association.

Mr. JOHN KNOWSLEY THORNTON, M.B., C.M.Edin. Consulting Surgeon to the Samaritan Free Hospital for Women, died at his residence, Hildersham Hall, Cambridge, on January 3, 1904, aged 57. He was House Surgeon to Lister at Edinburgh, and in 1873 became Surgeon to the Samaritan Free Hospital, and also Assistant to the late Sir Spencer Wells in private work. He soon obtained the reputation of being a most successful operator, especially for ovariectomy and other operations requiring abdominal section, and before long was recognised as an authority upon abdominal surgery. He was an ardent admirer of Lister, and was one of the first to apply his principles of antiseptics to abdominal surgery, and continued the use of the spray long after it had been abandoned by most surgeons. Owing to bad health he gave up hospital practice in 1891, and retired altogether in 1896. Apart from the articles on "Ovariectomy" and "Hysterectomy" in Heath's *Dictionary of Surgery*, and that on "Hysterectomy" in Albutt's *System of Medicine*, most of his writings appeared in the medical journals or transactions of various medical societies. He had been President of the Harveian and Medical Societies, and was an Honorary Fellow of the American Gynæcological Society, and a Corresponding Fellow of the Boston Gynæcological Society.

Dr. KARL GEBHARD, Privatdozent of Obstetrics and Gynæcology in the University of Berlin, died recently at the age of 42.

Also the deaths of—

Dr. D. M. KIREIEW, Privatdozent of Obstetrics and Gynæcology in the Military Academy at St. Petersburg.

Dr. W. SHAW STEWART, formerly Professor of Obstetrics and Gynæcology, and for many years Dean, of the Medico-Chirurgical College of Philadelphia, of which he was one of the founders.

Dr. GEORGE EUGENE YARROW, Surgeon Accoucheur, and Lecturer on Midwifery of the City of London Lying-

in-Hospital, and late Surgeon to the Royal Maternity Charity.

Dr. ARMAND DERIVAUX, a native of Alsace, Consulting Obstetrician to the Bethesda Homes, and a member of the St. Louis Obstetric and Gynæcological Society, from ascending paralysis, at the age of 54.

Professor S. POZZI and Sir JOHN WILLIAMS, Bart., have been elected Honorary Fellows of the London Obstetrical Society.

Dr. H. MACNAUGHTON-JONES has been elected a Corresponding Member of the Munich Gynæcological Society.

Dr. W. WILLIAMS is delivering the Milroy Lectures this year at the College of Physicians on February 25 and March 1 and 3, at 5 p.m., his subject being "Deaths in Childbed, a Preventable Mortality."

Dr. W. F. VICTOR BONNEY, M.D.Lond., F.R.C.S., M.R.C.P., has been appointed Lecturer in Midwifery in the Middlesex Hospital Medical School.

Dr. R. J. JOHNSTONE has been elected physician to the Belfast Maternity Hospital, in place of Dr. JOHN CAMPBELL, who has resigned the position of visiting physician.

Dr. HENRY CORBY, Professor of Midwifery, Queen's College, Cork, has been appointed High Sheriff of the City of Cork.

Professor M. HOFMEIER, of Wuerzburg, has been elected a Corresponding Member of the Paris Obstetrical and Munich Medical Societies, and an Honorary Fellow of the Italian Obstetrical and Gynæcological Society.

A bust of Professor the late HERMANN LOEHLEIN, executed by Brunnow, of Berlin, has been placed in the University Frauenklinik at Giessen.

Professor A. P. GOUBAREW has been given the Chair of Obstetrics and Gynæcology in the University of Moscow, and Professor Dr. A. MOURATOW the similar appointment at Kiew.

Privatdozent Dr. ERICH OPITZ has been appointed an Extraordinary Professor of Gynæcology at Marburg.

Dr. ERWIN KEHRER, Assistant at the Heidelberg Frauenklinik, has qualified as Privatdozent of Gynæcology. As the subject of his inaugural address he took "The existing views on the value of Modern Operations for Uterine Carcinoma."

Dr. FR. KERMAUNER has also qualified at Heidelberg, his habilitationschrift being on "Sterility in Women."

Dr. OSCAR POLANO has qualified as Privatdozent of Midwifery and Gynæcology with an essay on "The Biology of Pregnancy."

Dr. HANS FUCHS, well known for his advocacy of Atmokausis, is settling as a Gynæcologist in Danzig.

Dr. OTTOMAR HOEHME, First Assistant at the University Frauenklinik at Kiel, succeeds Dr. FUCHS as a Senior Physician.

Professor L. M. BOSSI, whose election as deputy for Varese to the National Parliament we announced in the February number, has, at the request of the Faculty of Medicine, been appointed Ordinary Professor of Obstetrics and Gynæcology in the University of Genoa.

Professor CLIVIO, of Parma, was nominated for the Chair of Obstetrics and Gynæcology at Pavia, by the Commission which, with the late Professor Tibone, included Professors Morisani, Falaschi, Mangiagalli and Romiti; the Commission also nominated Professor RESINELLI, of Cagliari, as an extraordinary professor at Catania.

The following appointments as Extraordinary Professors of Obstetrics and Gynæcology for the current scholastic year, have since been announced :—

Professor G. RESINELLI, at Parma, with direction of the Obstetric and Gynæcological Clinic.

Professor G. MIRANDA, at Catania.

Professor G. VICARELLI, at Turin, with direction of the Obstetric and Gynæcological Clinic.

The "venia legendi" in Obstetrics and Gynæcology has been given to Dr. SALVATORE AMICO-ROXAS at Catania ; to Dr. FERRUCIO GRIZIOTTI, at Parma ; to Dr. GIUSEPPE GUICCIARDI, at Florence ; Dr. LUIGI ADOLFO OLIVA, at Pisa ; and to Dr. V. VALDAGNI, at Turin.

Dr. CESARE FINZI, Clinical Assistant in Obstetrics at Venice, has been given a similar position in the University Clinic at Padua.

In consequence of the recent deaths of Dr. BOUILLY and others, various changes have taken place in the staffs of the Paris Hospitals. Dr. GUSTAVE RICHELLOT, Surgeon to the Hôpital Saint-Louis, has been appointed Chief of the Gynæcological Department of the Hôpital Cochin ; Dr. MONOD is transferred from the Saint-Antoine to the Cochin, and Dr. ROCHARD to the Tenon Hospital, for the gynæcological services of those institutions.

Professor A. MONPROFIT, of Angers, has been awarded the Prix Mége, amounting with arrears to 10,000 francs, for an essay on "The Causes which have retarded or favoured the Progress of Medicine."

Dr. STROHEKER, of Paris, has gained the Prix Tarnier for Obstetrics.

Dr. A. E. GROSSE has been appointed for the usual term of nine years to the Chair of Midwifery in the Medical School of Nantes, and Dr. SILHOL to that of Pathology and Clinical Surgery and Obstetrics at Marseilles.

The Fourth Session of the French National Congress of Gynæcology, Obstetrics and Pædiatry will meet at Rouen on April 5-10, 1904. Dr. RICHELLOT, President General of the Congress, will also preside over the section for Gynæcology, while Dr. GUILLEMET, Professor at the Medical School of Nantes, will preside in the Obstetric Section, and Dr. KIRMISSON over that of Pædiatrics. The following reports will be made : "On the Malignity of Ovarian Cysts," by Professor CZERNE, of Rouen ; "On Hysteropexy in regard to subsequent Pregnancies, by Professor OUI, of Lille ; "On Pyelonephritis in its relation to Childbed," by Professor LEGUEU, of Paris ; "On raw Milk in the

Alimentation of Infants," by Professor MÉRY, of Paris ; "On Barlow's Disease," by Professor AUSSET, of Lille ; "On Cutaneous Infections in Infants," by Dr. d'ASTROS, of Marseilles ; "On Intestinal Intussusceptions in the Infant," by Dr. GRISEL, of Paris ; "On the later results of Transplantation of Tendon in the Treatment of Infantile Paralysis," by Dr. Derocque, of Rouen.

The American Association of Obstetricians and Gynæcologists will meet in St. Louis in September, 1904. Dr. WALKER B. DORSETT, of St. Louis, is the President-Elect.

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A. W. MAYO ROBSON, F.R.C.S., Leeds.
JAMES F. W. ROSS, M.D., Toronto.
A. LAPHORN SMITH, M.D., Montreal.
E. S. STEVENSON, M.D., Cape Town.
WILLIAM WALTER, M.D., Manchester.
RALPH WORRALL, M.D., Sydney.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

FOUNDED 1884.

INCORPORATED 1885.

List of Abbreviations.

H.P., Honorary President.
 Pres., President.
 V.-P., Vice-President.
 C., Council.
 Libr., Librarian.
 Treas., Treasurer.

Hon. Sec., Honorary Secretary.
 Hon. Loc. Sec., Honorary Local
 Secretary.
 F.F., Foundation Fellow.]
 L., Life Fellow.

Those marked with an asterisk () have not communicated their address.*

Those marked with a dagger (†) are on the list of Resident Fellows, or are non-Resident Fellows who have intimated their wish to receive Agenda Notices of the Ordinary Meetings.

HONORARY FELLOWS.

- 1885 EMMETT, THOMAS ADDIS, M.D., New York.
 1885 HEGAR, A., M.D., Freiburg i. B.
 1885 KOEBERLE, F., M.D., Strasbourg.
 1885 MARTIN, A., M.D., Berlin.
 1885 v. WINCKEL, F., M.D., Munich.
 1887 BARNES, ROBERT, M.D., London.
 1891 POZZI, S., M.D., Paris.
 1893 KUFFERATH, E., M.D., Brussels.
 1898 LEOPOLD, GEORGES, M.D., Dresden.
 1895 ATTHILL, LOMBE, M.D., Dublin.
 1899 KELLY, HOWARD A., M.D., Baltimore.
 1899 SCHAUTA, FREDERIC, M.D., Vienna.
 1900 SAVAGE, THOMAS, M.D., Birmingham.
 1900 DOYEN, EDWARD, M.D., Paris.
 1901 ROUTH, CHARLES HENRY FELIX, M.D., London.
 1901 SCHULTZE, BERNHARD SIGMUND, M.D., Jena.
 1902 ZWEIFEL, PAUL, M.D., Leipsic.
 1903 v. REIN, G., M.D., St. Petersburg.
 1903 SNEGIREV, VLADIMIR FEDOROVIC, M.D., Moscow.
 1903 MANGIAGALLI, LUIGI, M.D., Pavia.
 1903 MORISANI, OTTAVIO, M.D., Naples.
 1903 JACOBS, C., M.D., Brussels.

HONORARY FELLOWS DECEASED.

- 1885-1895 KEITH, THOMAS, M.D., London.
 1885-1902 LAZAREWITCH, J., M.D., St. Petersburg.
 1885-1902 PORRO, S., M.D., Milan.
 1887-1899 TAIT, LAWSON, F.R.C.S., Birmingham.
 1885-1901 HARVEY, ROBERT, M.D., Calcutta.
 1885-1897. TARNIER, S., M.D., Paris.
 1885-1903 THOMAS, T. GAILLARD, M.D., New York.

ORDINARY FELLOWS, 1904.

Elected

- 1899 †AARONS, S. JERVOIS, M.D., C.M.Edin., M.R.C.P.
 Lond., 14, Stratford Place, w.
 Hon. Sec. 1903-4.
 L. 1888 ADAM, G. ROTHWELL, M.B., C.M., Carlton House,
 Hotham East Street, Melbourne, Victoria.
 F.F. †ADAMS, JOSEPH, M.B., C.M.Edin., 93, Bewsey
 Street, Warrington, Lancashire.
 1888 AIKEN, GEORGE HENRY, M.D., Fresno, California.
 F.F. †ALEXANDER, WILLIAM, M.D., F.R.C.S.Eng., 31,
 Rodney Street, Liverpool.
 C. 1887-9 & 1900-2. V.P. 1890-2.
 F.F. ALLAN, JAMES, M.D.Aberd., D.P.H.Camb., Medical
 Superintendent, Union Infirmary, Leeds.
 1896 *ALLEN, HENRY MARCUS, F.R.C.P.Edin., M.R.C.S.
 1898 ALLEN, JAMES F., M.D., M.Ch., R.U.I., 70, Clap-
 ham Road, Bedford.
 1902 ANDERSON, DANIEL ELIE, M.D.Paris, M.B., B.A.,
 B.Sc.Lond., &c., 121, Avenue des Champs
 Elysées, Paris.
 1898 †APPLEBE, E. A., L.R.C.P.Edin., L.F.P.S.G., 1,
 Southgate Road, Winchester.
 1885 †ARMSTRONG, WILLIAM, M.R.C.S.Eng., Thorncliffe,
 Hartingdon Road, Buxton.
 C. 1897-9. V.-P. 1900-2.
 1903 ARNOLD, SAMUEL CARNELLY, M.B., C.M.Edin.,
 73, Kingston Crescent, Portsmouth.
 1898 ATKINS, THOMAS GELSTON, M.A., M.D., R.U.I.,
 Surgeon Cork County Hospital, and Co. and
 City of Cork Women's and Children's Hospital,
 20, St. Patrick's Place, Cork.

Elected

- 1898 BAGNELL, WILLIAM HARRY, L.R.C.S.I., L.R.C.P.
Edin., Officier de Santé Bordeaux, 4, Rue de
Perpigna, Pau, France.
- 1889 BAGOT, WILLIAM S., M.D.Dub., L.R.C.S.I., Gynæ-
cologist to St. Luke's Hospital, Denver,
532, Seventeenth Street, near Wellow,
Denver, Colorado, U.S.A.
- L. 1888 BAKER, CLARENCE ATTWOOD, M.D., 312, Congress
Street, Portland, Maine, U.S.A.
- L. 1885 BAKER, WILLIAM HENRY, M.D., Professor of
Gynæcology Harvard University, Surgeon to
the Free Hospital for Women, Boston, 22,
Mount Vernon Street, Boston, Mass., U.S.A.
- 1898 †BAKEWELL, ROBERT TURLE, M.B.Lond., 27, Wel-
beck Street, Cavendish Square, w.
- 1903 *BALDWIN, W. W., M.D., New York, U.S.A.
- 1887 BALLERAY, G. H., M.D., 115, Broadway, Paterson,
Jersey, U.S.A.
- L. F.F. †BANTOCK, G. GRANVILLE, M.D., F.R.C.S.Edin.,
Consulting Surgeon to the Samaritan Free
Hospital, 14, Upper Hamilton Terrace, n.w.
Trustee. Pres. 1887. V.-P. 1884-6 &
1887-9. Treas. 1888-90. C. 1891-3.
Libr. 1894-6.
- L. F.F. †BARBOUR, A. H. FREELAND, M.A., B.Sc., M.D.,
Assistant Obstetric Physician Royal Infirmary,
Edinburgh, 4, Charlotte Square, Edinburgh.
C. 1884-8 & 1901-3. V.-P. 1893-5.
- F.F. †BARNES, ROBERT, M.D., F.R.C.P., Consulting
Obstetric Physician to St. George's Hospital,
Consulting Physician to the Royal Maternity
Charity, &c., &c., Bernersmede, Eastbourne.
Hon. Pres. 1884-1904.
- F.F. †BARNES, R. S. FANCOURT, M.D., M.R.C.P.,
F.R.S.E., Physician to the British Lying-in
Hospital, and the Royal Maternity Charity,
15, Chester Terrace, Regent's Park, n.w.
Trustee. Editor 1884-1891. Hon. Sec.
1884-6. V.-P. 1887-9 & 1892-4.
- 1899 †BARRETT, JAMES FRANCIS, M.B., B.Ch., R.U.I.,
Edburga House, The Bank, Highgate.
- L. 1886 BARRINGTON, FOURNESS, M.B., F.R.C.S.Eng., 213,
Macquarie Street, Sydney, Australia.

Elected

- 1898 †BARTER, WILLIAM, M.D., M.Ch., R.U.I., 47, Green-croft Gardens, West Hampstead, N.W.
- 1899 †BARTON, CHARLES NATHANIEL, M.R.C.S., L.R.C.P., 17, Redcliffe Gardens, S.W.
- L. 1885 BATCHELOR, FERDINAND CAMPION, M.D.Durh., M.R.C.S.Eng., L.R.C.P.Edin., Lecturer on Midwifery and Gynæcology University of Otago, George Street, Dunedin, New Zealand.
V.-P. 1893-5.
- L. F.F. †BAYFIELD, HORACE OSBORNE, L.R.C.P.Edin., L.F.P.S.Glasg., Tracadie, Merton Road, Wimbledon, S.W.
- 1903 BEATTON, GILBERT TAYLOR, M.D.Edin., The Cliff, Bradford, Yorks.
- 1892 BECKWITH, FRANK E., M.D., 139, Church Street, New Haven, Conn., U.S.A.
- F.F. BELL, ROBERT, M.D., F.F.P.S.Glasg., Physician to the Glasgow Institute for Diseases of Women and Children, 29, Lynedock Street, Glasgow. C. 1885-7. V.-P. 1891-3.
- 1898 †BELLIS, EDWARD, L.R.C.P., L.R.C.S.I., 81, Holland Park Avenue, Notting Hill, W.
- F.F. †BENNETT, CHARLES HENRY, M.D., M.R.C.S., L.S.A. College House, Hammersmith, W.
V.-P. 1895-7. Auditor 1895-1904.
C. 1892-4.
- F.F. †BERTOLACCI, JOHN HEWETSON, L.S.A., Elstead, Godalming.
- 1903 BIELBY, MISS ELIZABETH, M.D.Berne, L.M. and L.R.C.P.I., Lahore, India.
- 1886 †BIGGS, MOSES G., M.R.C.S., 101, Northcote Road, New Wandsworth, S.W.
- 1903 BIRTWELL, DANIEL, L.R.C.P., L.R.C.S.Edin., Durban, Natal.
- 1898 †BISHOP, EDWARD STANMORE, F.R.C.S.Eng., L.R.C.P.Edin., Surgeon to the Ancoats Hospital, 316, Oxford Road, Manchester.
V.-P. 1903-4. C. 1901-2.
- L. F.F. †BLAKE, EDWARD, M.D., Berkeley Mansions, 64, Seymour Street, Hyde Park, W.
- 1898 †BLAKISTON, AUBREY, L.R.C.P., L.R.C.S.Edin., 5, Grosvenor Street, Grosvenor Square, W.

Elected

- 1901 BODDEART, EUGENE, M.D., Gand Coupure 46,
Ghent, Belgium.
- L. 1890 BOLDT, H. J., M.D., 39, East 61st Street, New
York.
- 1903 BOSSI, Professor L. M., Director of the Obstetrical
and Gynæcological Clinic, Via Assaroti 20,
Int. ii., Genoa.
- 1891 †BOURKE, W. H., M.D., 8, Moreton Gardens, s.w.
C. 1900-2.
- 1887 †BOURNS, N. WHITELAW, M.D.Brux., M.R.C.S.Eng.,
L.R.C.P.Edin., 78, Redcliffe Gardens, South
Kensington, s.w. C. 1899.
- 1887 †BOWIE, ALEX., M.D., C.M., 4, Hertford Street,
Park Lane, w.
- L. 1885 BOYD, JAMES P., M.D., Professor of Obstetrics and
Gynæcology Albany Medical College, 152,
Washington Avenue, Albany, New York,
U.S.A.
- 1903 BRANDT, JOHN EGERTON, B.A.Camb., M.D.Edin.
and Paris, Royat, Puy de Dome (summer),
and Nice, France (winter).
- 1891 †BREWIS, N. T., M.B., C.M., F.R.C.P.Edin., Assist-
ant Gynæcologist to the Royal Infirmary,
23, Rutland Street, Edinburgh.
- 1893 †BRIDGER, ADOLPHUS E., M.D., F.R.C.P.Edin.,
Physician St. Pancras and Northern Dis-
pensary, 18, Portland Place, w.
- 1899 †BROWN, JOHN HENRY, M.D.Edin., M.R.C.S., 14,
Burngrave Road, Sheffield.
- 1896 *BROWNE, RALPH HENRY, M.D., M.R.C.S., L.R.C.P.
Lond.
- L. 1889 BROWNLEE, MILNE, M.D., Woodstock, Ontario,
Canada.
- 1903 †BUCKLEY, SAMUEL, M.D.Lond., M.R.C.P., F.R.C.S.,
72, Bridge Street, Manchester.
- L. 1885 BUDIN, PIERRE, M.D., Professeur agrégé à la
faculté de Médecine de Paris, Accoucheur de
la Charité, 4, Avenue Hoche, Paris.
- 1903 *BULL, RALPH ANTONY, L.R.C.P., L.R.C.S.Edin.
- 1892 BUMM, ERNEST, M.D., Professor of Obstetrics and
Gynæcology in the University of Universiltæts
Frauenklinik, Halle a. S., Germany.

Elected

- 1887 †BURFORD, GEORGE HENRY, M.B., C.M.Aberd., 35,
Queen Anne Street, w.
- 1898 †BURKE, PATRICK JOSEPH, M.D., M.Ch., M.A.O.,
R.U.I., 23, Long Lane, Borough, s.e.
- 1887 †BURY, EDWARD CHARLES, M.D.St.And., M.R.C.S.,
L.S.A., 5, York Row, Wisbech, Cambs.
- L. F.F. †BUXTON, DUDLEY WILMOT, M.D., B.S., M.R.C.P.
Lond., Anæsthetist to University College Hos-
pital, 82, Mortimer Street, Cavendish Square,
w. C. 1895-7.
- 1885 †BYERS, JOHN WILLIAM, M.A., M.D., M.Ch., R.U.I.,
M.R.C.S.E., L.M., R.C.P.I., Professor of Mid-
wifery and Diseases of Women and Children,
Queen's College, Belfast, and Physician for
Diseases of Women to the Royal Hospital,
Belfast, Lower Crescent, Belfast.
Hon. Loc. Sec. C. 1893-5. V.-P. 1896-8.
- 1894 BYFORD, HENRY T., M.D., 100, State Street,
Chicago, Ill., U.S.A.
- 1887 CALDWELL, W. SPENCER, M.D., Freeport, Ill.,
U.S.A.
- F.F. †CAMBRIDGE, THOMAS ARTHUR, M.R.C.S.Eng.,
L.S.A., Stanley Lodge, Waltersville Road,
Upper Hornsey Rise, n.
C. 1887-9. V.-P. 1890-2.
- 1887 CAMERON, J. C., M.D., Professor of Midwifery
McGill University, 941, Dorchester Street,
Montreal.
- 1895 †CAMERON, MURDOCH, M.D., Regius Professor of
Midwifery and Diseases of Women in the
University of Glasgow. 7, Newton Terrace,
Glasgow.
Hon. Loc. Sec. C. 1899-1901. V.-P. 1902-4.
- 1898 *CAMERON, WILLIAM JOHN, M.B.Lond.
- 1897 CAMPBELL, COLIN GRAHAM, M.B., C.M.Edin., Car-
brook, Queen's Park, Toronto, Canada.
- 1894 †CAMPBELL, JOHN, M.A., M.D., M.Ch., M.A.O.,
R.U.I., F.R.C.S.Eng., Senior Physician Samari-
tan Hospital for Women, Belfast, Crescent
House, University Road, Belfast.
C. 1899-1901. V.-P. 1902-3.

Elected

- 1892 CAMPBELL, MALCOLM, M.A., M.D., C.M., F.R.C.S.
Edin., 17, Walker Street, Edinburgh.
- F.F. CAMPBELL, WILLIAM FREDERICK, L.R.C.P. Edin.,
L.F.P.S. Glasg., 67, Bentham Road, South
Hackney.
- 1892 CANNADAY, C. G., M.D., Roanake, Virginia, U.S.A.
- L. 1886 CARSTENS, J. HENRY, M.D., Detroit, Michigan,
U.S.A.
- 1891 †CARTER, ARTHUR JOSEPH, M.R.C.S., 75, Shepherd's
Bush Road, w.
- F.F. †CARTER, GEORGE ROE, M.R.C.P.I., L.R.C.S.I.,
Oakhurst, 2, Anerley Park, S.E.
C. 1899-1901 & 1903-4.
- 1901 †CARTON, PAUL, M.D., B.Ch., B.A.O. Dub., Assistant
Master Rotunda Hospital, Dublin, 35, Rut-
land Square, Dublin.
- 1898 †CARWARDINE, THOMAS, M.S. Lond., F.R.C.S. Eng.,
16, Victoria Square, Clifton, Bristol.
- F.F. †CASE, WILLIAM, M.R.C.S., L.S.A., Denmark House,
Caister-on-Sea, Norfolk.
- 1895 †CHAMBERS, EBER, M.D. Aberd., M.R.C.S., District
Medical Officer City of London Lying-in Hos-
pital, 1, Wilmington Square, w.c.
C. 1902. V.-P. 1903.
- L. 1885 CHAMBERS, P. FLEWELLEN, M.D., 26, West Forty-
seventh Street, New York, U.S.A.
- 1898 †CHEETHAM, SYDNEY WILLIAMS, M.R.C.S., L.R.C.P.
Lond., 233, Romford Road, E.
- 1892 CHENEY, BENJAMIN AUSTIN, M.D., 40, Elm Street,
New Haven, Connecticut, U.S.A.
- 1898 CHESTNUT, HENRY, L.R.C.P., L.R.C.S. Edin., Tralee,
Co. Kerry, Ireland.
- 1898 CHESTNUTT, JOHN, B.A., R.U.I., L.R.C.S., L.R.C.P.,
Derwent House, Howden, East Yorkshire.
- 1895 †CLARK, TOM, L.R.C.P. & L.R.C.S. Edin., 1, West-
burn Street, Eaton Square, S.W.
- L. 1887 †CLARK, THOMAS KILNER, M.A., M.D. Camb.,
F.R.C.S. Eng., Surgeon Huddersfield Infirmary,
66, John William Street, Huddersfield.
C. 1895-7.
- 1898 *CLARKE, JOSEPH JOHN, L.R.C.P.I.

Elected

- 1898 †CLARKE, RICHARD ASHMORE, L.R.C.P., L.R.C.S.I.,
Surgeon to Teddington Cottage Hospital,
Goudhurst, Teddington.
- 1896 †CLAYTON, CHARLES HOLLINGSWORTH, M.R.C.S.,
L.R.C.P., 10, College Terrace, Belsize Park,
N.W.
- L. F.F. CLENDINNEN, FREDERICK JOHN, L.R.C.P.Lond.,
L.R.C.P., L.R.C.S.Edin., 465, Malvern Road,
Hawksburn, Melbourne, Australia.
Hon. Loc. Sec.
- 1899 COATES-COLE, J. M., M.R.C.S., L.R.C.P., Mara-
caibo, Venezuela, S. America.
- 1898 †COKER, OWEN COLE, L.R.C.P., L.S.A., 155, Ux-
bridge Road, w.
- 1903 COLE-BAKER, LYSTER, M.D., B.Ch., B.A.O.Dub.,
Bayfield, Kent Road, Southsea.
- 1893 †COLENZO, ROBERT J., M.A., M.D.Oxon., M.R.C.S.,
91, Cromwell Road, s.w. C. 1902-4.
- 1890 †COLLINS, E. TENISON, M.R.C.S., L.S.A., Gynæ-
cologist to Cardiff Infirmary, 12, Windsor
Place, Cardiff. Hon. Loc. Sec. C. 1896-8.
- 1903 COOK, JAMES WILLIAM, M.B., C.M.Aberd., 26,
Manchester Road, Bury, Lancashire.
- 1903 COOK, JOHN R., M.D., Fairmont, W. Virginia,
U.S.A.
- L. F.F. CORDES, AUGUSTE E., M.D.Paris, M.R.C.P.Lond.,
Privat-Doctent of Midwifery, ex-chirurgien
adjoiné à la Maternité, 12, Rue Bellot, Geneva.
V.-P. 1897-9.
- 1900 †CORRIGAN, WILLIAM JENKINSON, F.R.C.S.I.,
L.R.C.P.I., L.M., Cloughmore, Splott Avenue,
Cardiff.
- 1903 COTTON, HOLLAND J., M.D.Edin., 33, Lowndes
Street, s.w.
- 1900 †COWEN, RICHARD JOHN, L.R.C.P.I., L.M.,
L.R.C.S.I., L.M., 15, Half Moon Street.
Piccadilly, w.
- 1898 †CRABBE, JOHN SANDISON, L.R.C.P., L.R.C.S.Edin.,
Dundallen, Gravelly Hill, near Birmingham.

Elected

- 1895 CRAIG, WILLIAM BEDFORD, M.D., Visiting Gynæcologist to St. Luke's and St. Joseph's Hospital, Denver, and Professor of Gynæcology in the University of Denver Medical Department, 122, East Sixteenth Avenue, Denver, Colorado, U.S.A.
- 1900 †CRAMPTON, THOMAS HOBBS, L.R.C.P.I., L.R.C.S.I., L.M., 30, Myddleton Square, E.C.
- F.F. †CRANNY, JOHN JOSEPH, A.B., M.D.Dub., F.R.C.S.I., Surgeon to the Jervis Street Hospital, late Examiner in Midwifery, Royal College of Surgeons, Ireland, 17, Merrion Square, Dublin.
- 1886 †CRESSWELL, PEARSON ROBERT, F.R.C.S.Edin., C.B., Surgeon Merthyr General Hospital, &c., Dowlais, Merthyr Tydvil.
- 1888 *CRICHTON, GEORGE, A.M.St.And., M.D.Edin., L.R.C.S.Edin.
- 1888 †CRISP, ERNEST HENRY, B.A.Camb., L.R.C.P., M.R.C.S., 43, Fenchurch Street, E.C.
- 1891 *CROMIE, JOHN, L.R.C.P., L.R.C.S.Edin.
- 1891 †CROOM, Sir JOHN HALLIDAY, M.D., F.R.C.P.Edin., F.R.C.S.Edin., F.R.S.E., Consulting Gynæcologist to the Royal Infirmary, Consulting Physician to the Royal Maternity Hospital, and Lecturer on Midwifery and the Diseases of Women at the School of the Royal Colleges, Edinburgh, 25, Charlotte Square, Edinburgh.
C. 1884-6 & 1903-4. V.-P. 1887-9.
President 1902.
- L. 1887 CROUZAT, E., M.D., Professeur de Clinique d'Accouchements à la Faculté de Médecine de Toulouse, Toulouse, France.
- 1901 CULLEN, THOMAS. M.D., Gynæcologist to the Johns Hopkins Hospital, 3, West Preston Street, Baltimore, U.S.A.
- 1898 CUMMING, GEORGE WILLIAM HAMILTON, M.D. Durh., M.R.C.S., L.R.C.P., Annandale, Torquay, S. Devon.
- 1896 *DARLEY-HARTLEY, WILLIAM, L.R.C.P.Edin., M.R.C.S.Eng.

- Elected
1895 †DAUBER, JOHN H., M.A., M.B., B.Ch.Oxon.,
Assistant Physician Hospital for Women,
Soho, 29, Charles Street, Berkeley Square, w.
C. 1900-1.
- F.F. †DAVIES, ELLIS THOMAS, M.D., Hon. Surgeon
Samaritan Free Hospital for Women, Liver-
pool, 97, Shaw Street, Liverpool.
C. 1901-3.
- 1900 †DAVIES, JOHN STANLEY, M.B., C.M.Glasg., 262,
Queen's Road, New Cross.
- 1897 *DELAMOTTE, PETER WILLIAM, M.R.C.P.Edin.,
M.R.C.S.E.
- L. 1887 DEWES, FREDERICK JOSEPH, L.R.C.P.Lond.,
M.R.C.S.E., Surgeon-Captain Madras Army,
c/o Messrs. A. Scott & Co., Rangoon, India.
- L. F.F. †DINGLE, WILLIAM ALFRED, M.D.St. And., L.R.C.P.
Lond., M.R.C.S.Eng., L.S.A., Surgeon Royal
Maternity Charity, 46, Finsbury Square,
E.C. C. 1889-91. V.-P. 1892-4.
- L. 1888 DIRNER, GUSTAV, M.D., 9, Kossuth Utoxa, Buda
Pesth, Hungary.
- F.F. †DIXON, WILLIAM EDWARD, L.R.C.P., F.R.C.S.
Edin., M.R.C.S., Oulton Lodge, Oulton Broad,
Lowestoft.
- 1898 †DODSWORTH, FREDERICK CHARLES, L.R.C.P.,
M.R.C.S., Ingleden House, Gunnersbury.
- F.F. †DOLAN, THOMAS M., M.D.Durh., F.R.C.S.Edin.,
Horton House, Halifax, Yorkshire.
C. 1886-8, 1892-4 & 1902-4. V.-P. 1889-91.
- 1898 †DON, WILLIAM WALTON, M.D.Glasg., 466, Edg-
ware Road, w.
- 1895 †DONALD, ARCHIBALD, M.A., M.D.Edin., M.R.C.P.
Lond., Obstetric Physician Royal Infirmary,
Manchester, Platt Abbey, Rusholme, Man-
chester. C. 1897-9.
- 1897 †DONALD, HUGH COLLIGAN, M.B., C.M.Glasg., 5,
Gauze Street, Paisley.
- 1898 †DONOVAN, WILLIAM, M.D.Durh., L.R.C.P. & S.
Edin., "Glandore," Erdington, Birmingham.
- L. 1889 DOUGLAS, RICHARD, M.D., 110, S. Spruce Street,
Nashville, Tennessee, U.S.A.

Elected

- 1896 †DOWNES, JOSEPH LOCKHART, M.B., C.M.Glasg.,
269, Romford Road, E.
- 1898 †DRAKE, A. THOMSON, M.B., R.U.I., 160, Lewisham
High Road, S.E.
- L. F.F. †DRAPER, JAMES WILLIAM, L.R.C.P.Lond., M.R.C.S.
Eng., L.S.A., Almondbury, Huddersfield.
- L. 1885 DUDLEY, EMILIUS CLARK, A.B., M.D., Professor
of Gynaecology Chicago Medical College, 1617,
Indiana Avenue, Chicago, U.S.A.
- 1902 DUNCAN, WILLIAM, M.D., M.R.C.P., F.R.C.S.,
Obstetric Physician and Lecturer on Obstetric
Medicine Middlesex Hospital, Senior Physi-
cian Chelsea Hospital for Women, 6, Harley
Street, W. C. 1904.
- F.F. *DUNDAS, MORDAUNT GEORGE, M.R.C.S., L.S.A.
- 1896 †DUTCH, HENRY, M.D.Brux., L.R.C.P.Lond., 8,
Berkeley Square, W.
- 1891 †EASTES, THOMAS, M.D., F.R.C.S., 18, Manor
Road, Folkestone. C. 1897-1900.
- 1890 ECCLES, F. R., M.D., Professor of Gynaecology at
the Western University, Ellwood Place,
London, Ontario, Canada.
- 1894 EDGE, FREDERICK, M.D., B.S., B.Sc.Lond.,
M.R.C.P.Lond., F.R.C.S.Eng., Surgeon to the
Wolverhampton Hospital for Women, and
to the Birmingham and Midland Hospital for
Women, 54, Darlington Street, Wolver-
hampton. C. 1897-9 & 1903-4.
- F.F. †ELDER, GEORGE, M.D., Surgeon to the Samaritan
Hospital for Women, Nottingham, 17, Regent
Street, Nottingham.
C. 1890-2 & 1904. V.-P. 1897-9.
- 1898 †ELLIOTT, FRANK PERCY, M.B., C.M.Aberd., 113,
Grove Road, Walthamstow, N.E.
- 1898 †EMERSON, THOS. G., M.D., M.Ch., R.U.I., Wan-
tage, Berks.
- 1894 EMMET, BACHE McE., M.D., 18, East Thirtieth
Street, New York, U.S.A. Hon. Loc. Sec.
- 1892 ENGLEMAN, FREDK., M.D., Kreuznach, Germany.
- 1890 †ENGLISH, T. JOHNSTON, M.D.Brux., 13, Gilston
Road, S.W. C. 1904.

Elected

- L. 1892 ENGSTROEM, Professor OTTO, M.D., Helsingfors, Finland.
- 1903 EVANS, FREDERICK WM., M.D., C.M.Aberd., M.R.C.S., 21, Charles Street, Cardiff.
- 1903 EVERS, CHARLES J., M.D.Durh., M.R.C.S., South Road, Faversham, Kent.
- 1903 †FEGAN, RICHARD ARDRA, M.R.C.S., L.R.C.P., Templecrone, Westcombe Park, s.e.
- 1891 FEHLING, Professor, M.D., Ruprechtsauer, Allee, Strasburg.
- L. 1886 FENGER, CHRISTIAN, M.D., 269, La Salle Avenue, Chicago, Illinois, U.S.A.
- 1894 *FENTON, FREDERICK ENOS, F.R.C.S., M.R.C.P. Edin.
- 1896 †FENWICK, BEDFORD, M.D.Durh., M.R.C.P.Lond., Physician to the Hospital for Women, Soho, 20, Upper Wimpole Street, w.
V.-P. 1890-92. C. 1886-7 & 1902-4. Libr. 1887-92. Hon. Sec. 1888-9. Editor 1892-4.
- 1893 *FERGUSON, GEO. GUNNIS, M.B., C.M.Glasg.
- 1895 †FERGUSON, JAMES HAIG, M.D., F.R.C.P.Edin., &c., Lecturer on Midwifery and Diseases of Women School of Medicine of the Royal Colleges, Gynæcologist Leith Hospital, Assistant Physician Royal Maternity Hospital, Edinburgh, 25, Rutland Street, Edinburgh. C. 1904.
- 1899 †FITZGERALD, EDWARD DESMOND, M.R.C.S., L.R.C.P., 5, Castle Hill Avenue, Folkestone.
- 1903 FITZGIBBON, GIBBON, M.D., B.Ch., B.A.O.Dub., Assistant Master Rotunda Hospital, Dublin.
- 1900 †FLEMING, ALEXANDER JOHN, M.D., M.Ch., R.U.I., 3, Arkwright Road, Hampstead, n.w.
- 1898 †FLOYD, THOMAS SARGENT, M.A., M.D.Dub., 16, Devonshire Road, Claughton, Birkenhead.
- 1898 FOGERTY, WILLIAM A., M.D., M.Ch., M.A.O., Surgeon Limerick Hospital, 67, George Street, Limerick.
- 1903 FOLEY, THOMAS McCRAITH, L.R.C.P., L.R.C.S.I., 5, Queen Street, Scarborough, Yorks.
- 1891 †FORDE, ERNEST S., L.R.C.P. & S.Edin. Dalry, Galloway.

Elected

- 1902 †FRANCIS, ARTHUR EDWARD, M.R.C.S., L.R.C.P.,
82, Cromwell Avenue, Highgate, N.
- 1902 FRANZ, K., M.D., Privat-Dozent and Pathologist
to the University Frauenklinik, Halle a. S.
- 1898 FRANZ, R. GRANT, M.D. Marburg and Berlin,
Schwalbach, Germany.
- 1903 FREND, JOHN ALFRED, M.D., M.R.C.P., L.R.C.S.I.,
375, Calle Urquizae, Rosario, Argentina.
- 1885 †FULLER, LEEDHAM, M.R.C.S. Eng., L.S.A. Lond.,
Oatlands, Streatham Hill, S.W.
- F.F. †GAGE-BROWN, CHARLES HERBERT, M.D., C.M. Edin.,
85, Cadogan Place, S.W. C. 1898-9.
- 1895 †GALLOWAY, ARTHUR W., L.R.C.P., M.R.C.S.,
"Malverns," Epping.
- 1903 GALLOWAY, DAVID JAMES, M.D., Ch.M., F.R.C.P.
Edin., The Manor House, Singapore.
- F.F. †GARDINER, BRUCE HERBERT JOHN, M.D., L.R.C.P.
Edin., M.R.C.S., 48, Barry Road, East Dulwich,
S.E.
- F.F. GARDNER, WILLIAM, M.D., Professor of Gynæ-
cology in McGill University, 109, Union
Avenue, Montreal, Canada. V.-P. 1887-9.
- 1895 †GIFFARD, H. E., M.R.C.S., Denham House, Egham,
Surrey.
- L. 1885 †GILES, PETER BROOME, M.R.C.S., L.R.C.P., Holne
Chase, Bletchley, Bucks.
- 1900 †GLENN, JOHN HUGH ROBERT, M.D. Dub., F.R.C.P.I.,
Gynæcologist to Mercer's Hospital, 24, Lower
Bagot Street, Dublin.
- 1897 †GODFREY, FRANK W. A., M.B., & C.M. Edin., Hon.
Surgeon Scarborough Hospital and Dispen-
sary, 5, Montpellier Terrace, Scarborough.
- 1891 †GODSON, CLEMENT, M.D., M.R.C.P., Consulting
Physician to the City of London Lying-in
Hospital, late Assistant Physician Accoucheur
St. Bartholomew's Hospital, 82, Brook Street,
Grosvenor Square, W.
Trustee. C. 1892-4 & 1897-9, 1904.
V.-P. 1902-3. Pres. 1895-6.
- 1903 GOODLIFFE, JOHN HENRY, M.D., M.S. Aberd., Fin-
bar House, Lower Tottenham.

Elected

- L. 1886 GORDON, SETH CHASE, M.D., 157, High Street, Portland, Maine, U.S.A.
- 1891 GOWANS, WILLIAM, M.D.Durh., F.R.C.S.Edin., Westoe House, Westoe, South Shields.
- 1896 GRAY, WILLIAM, M.D., C.M.Edin., Victoria Road, West Hartlepool.
- 1891 GREEN, W. O., M.D., 709, 2nd Street, near Chestnut, Louisville, Kentucky, U.S.A.
- 1900 GREER, WILLIAM JONES, F.R.C.S.I., L.R.C.P.I., L.M., D.P.H., 2, Cheptsow Road, Newport, Monmouthshire.
- F.F. †GRIFFITH, G. DE GORREQUER, L.R.C.P., M.R.C.S., late Senior Physician to Hospital for Women and Children, Pimlico, 34, St. George's Square, s.w., and New Indian Club, Whitehall Gardens, s.w.
- L. 1885 †GRIMSDALE, THOMAS BABINGTON, B.A., M.B.Camb., M.R.C.S., Gynæcological Surgeon Liverpool Royal Infirmary, 29, Rodney Street, Liverpool.
Hon. Loc. Sec. C. 1894-6.
- 1898 †GUNTON, GEORGE ANDREW, L.R.C.P.I., L.S.A., 3, Sloane Court, s.w.
- 1895 HALL, ERNEST AMOS, M.D., C.M.Ont., L.R.C.P. Edin., 92, Government Street, Victoria, British Columbia.
- L. 1885 HALL, RUFUS B., M.D., 37, Crown Street, Walnut Hills, Cincinnati, U.S.A.
- 1897 †HARLEY, HENRY, M.D., R.U.I., 27, Victoria Road, Battersea Park, s.w.
- F.F. †HARRIES, THOMAS DAVIES, M.R.C.P.Lond., F.R.C.S. Eng., Surgeon Aberystwith Infirmary and Cardiganshire General Hospital, Grosvenor House, Aberystwith.
- 1898 †HARTT, CHARLES HENRY, L.R.C.P.I., L.R.C.S.I., L.M., 14, Croom's Hill, Greenwich, s.e.
- F.F. †HAULTAIN, FRANCIS WM. NICOL, M.D., F.R.C.P. Edin., Physician for Diseases of Women, Royal Dispensary, Lecturer on Midwifery and Diseases of Women, Edinburgh School of Medicine, 17, Rutland Street, Edinburgh.
Hon. Loc. Sec. C. 1896-8. V.-P. 1902-3.

Elected

- 1889 †HAWKES, A. E., M.D.Brux., L.R.C.P., L.R.C.S.
Edin., 22, Abercromby Square, Liverpool.
- 1902 HAYES, GEORGE SULLIVAN CLIFFORD, M.R.C.S.,
L.R.C.P., Parncah, Purecal Lines, Bengal.
- 1901 HAYNES, Captain E. J. A., F.R.C.S., 390, Hay
Street, Perth, Western Australia.
- L. 1886 HEADLEY, W. BALLS, M.A., M.D., F.R.C.P., 4,
Collins Street, Melbourne, Australia.
C. 1896-8.
- 1887 *HEALD, BENJAMIN GREY, L.R.C.P.Edin., L.F.P.S.
Glasg.
- F.F. †HEBERT, PAUL ZOTIQUE, M.D., C.M.McGill,
L.R.C.P.Lond., 16A, Old Cavendish Street,
Cavendish Square, w. C. 1896-8.
- L. 1885 HEIBERG, WILHELM, M.D., Surgeon to the County
Hospital of Copenhagen, Frederiksberg, Copen-
hagen.
- 1898 †HELME, THOMAS ARTHUR, M.D.Edin., M.R.C.P.
Lond., M.R.C.S.Eng., Hon. Senior Assistant
Surgeon Clinical Hospital for Women and
Children, Manchester, 337, Oxford Road,
Manchester. C. 1903-4.
- L. 1887 HETHERINGTON, GEO. ALBERT, M.D., St. John,
N.B., Canada.
- 1903 HIGHMOOR, RICHARD NICHOLSON, M.B., C.M.
Edin., Litcham, Swaffham, Norfolk.
- 1871 †HILL, J. STONELEY, M.B. & C.M.Edin., 33, Great
Charlotte Street, Blackfriars Road, S.E.
- F.F. †HILLS, AUGUSTUS PHILLIPS, M.R.C.S.Eng., Carlton
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Park, s.w.
- F.F. †HINE, ALFRED LEONARD, L.R.C.P.Lond., M.R.C.S.,
L.S.A., Eppingdale, Leytonstone Road, E.
C. 1891.
- L. 1887 HOAG, JUNIUS C., M.D., 4669, Lake Avenue,
Chicago.
- F.F. †HODGSON, ROBERT HUGH, M.D.Durh., M.R.C.S.
Eng., 166, Peckham Rye, East Dulwich.
C. 1894-7 & 1901-3. V.-P. 1898-1900.
- 1895 †HOLLAND, C. E., M.B., C.M.Edin., Airdrie, The
Avenue, Kew Gardens, Surrey.

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- F.F. †HOLLAND, EDMUND, M.D., M.R.C.P., F.R.C.S.,
Physician to the Hospital for Women, Soho,
1, Titchfield Terrace, North Gate, Regent's
Park, N.W. C. 1893-5.
- L. 1885 HOOPER, JOHN WILLIAM DUNBAR, L.R.C.P.,
L.R.C.S.Edin., Surgeon to the Women's Hos-
pital, Melbourne, 70, Collins Street, East
Melbourne.
- 1899 HORNE, ANDREW JOHN, F.R.C.P.I., 94, Merri-
on Square, Dublin.
- 1903 †HOSFORD, BENJAMIN, M.A., M.D., M.Ch., M.A.O.,
R.V.I., 89, St. John's Road, Upper Holloway,
N.
- 1898 †HOWARD, ARTHUR WALTERS, M.R.C.S., L.R.C.P.,
83, Queen Street, Maidenhead.
- 1901 †HUGHES, GEORGE OSBORNE, M.D., &c., 22, Over-
strand Mansions, Prince of Wales Road, S.W.
- 1887 †HUTCHISON, GEORGE WRIGHT, M.D.Aberd.,
M.R.C.P.Edin., Chipping Norton, Oxon.
- F.F. †ISDELL, FITZGERALD, M.A., M.D.Dub., 189,
Shaftesbury Avenue, W.C.
- F.F. †JAMES, W. CULVER, M.D., 15, Marloes Road,
Kensington, W. C. 1884-6.
- 1903 †JAMESON, JAMES ELLIOTT, M.B., B.Ch., B.A.O.
Dub., 16, Church Road, Richmond, Surrey.
- 1894 †JARDINE, JAMES, M.B., C.M.Edin., 3, Lichfield
Gardens, Richmond, Surrey. C. 1902-4.
- 1888 †JELLETT, HENRY, M.D.Dub., F.R.C.P.I., 61, Lower
Mount Street, Dublin.
Hon. Loc. Sec. C. 1902-4.
- 1887 †JESSETT, FREDERICK BOWREMAN, F.R.C.S.Eng.,
Surgeon to the Cancer Hospital, Brompton,
23, Brook Street, W.
C. 1891-2, 1894-7 & 1901-3. V.-P., 1898-
1900, 1904. Pres. 1893.
- L. 1883 JEWETT, CHARLES, M.D., 330, Clinton Avenue,
Brooklyn, U.S.A.
- 1902 †JOHNSON, J. R., M.R.C.S., L.R.C.P., 7, Lancaster
Place, Richmond, Surrey.
- 1897 *JOHNSTON, G. J. WALDRON, M.D., R.U.I.

Elected

- 1886 †JOHNSTON, JOHN, M.R.C.S.Eng., 2, Rocky Hill Terrace, Maidstone.
- L. 1886 JOHNSTONE, ARTHUR, W., M.D., Madisonville Road, Cincinnati, Ohio.
- 1891 JOHNSTONE, GEORGE, W., L.R.C.P., Government Medical Officer, 3, Battery Road, Singapore.
- 1887 JONES, C. N. DIXON, M.D., 249, East 86th Street, New York, U.S.A.
- 1899 JONES, EVAN JAMES TREVOR, M.R.C.S., L.R.C.P., Ty-mawr, Aberdare, S. Wales.
- 1895 †JONES, JOHN, L.R.C.P., M.R.C.S., Claremont, Newlands Park, Sydenham, S.E.
- 1893 †JORDAN, JOHN FURNEAUX, M.B., R.U.I., F.R.C.S. Eng., Surgeon Women's Hospital, Birmingham, 9, Newhall Street, Birmingham.
C. 1899-1901.
- 1895 †KEITH, GEORGE ELPHINSTONE, M.B., C.M.Edin., 7, Manchester Square, W.
Hon. Sec. 1897-9. C. 1900-1.
- 1894 †KEITH, SKENE, M.B., C.M., F.R.C.S.Edin., 58, Upper Berkeley Street, W.
C. 1897-9. V.-P. 1900-3.
- L. 1889 KELLOGG, J. H., M.D., Battle Creek, Michigan, U.S.A.
- 1898 KELLY, HOWARD A., M.D., Univ. of Pennsylvania, Professor of Gynaecology and Obstetrics in Johns Hopkins University, 1406, Eutaw Place, Baltimore, Pa., U.S.A.
- F.F. †KENNEDY, JOHN BLYDESTYN, M.R.C.S.Eng., L.S.A., Stratford Hall, Stratford, E.
- 1903 KERR, JOHN MARTIN MUNRO, M.B., C.M., F.F.P.S. Glasg., Obstetric Physician Glasgow Maternity Hospital, 28, Berkeley Terrace, Glasgow.
- 1900 †KIDD, FREDERICK WILLIAM, M.D.Dub., Master of Coombe Hospital, Professor of Midwifery and Gynaecology, R.C.S.I., 17, Lower Fitzwilliam Street, Dublin,
C. 1902-3.
- L. 1886 KING, ALBERT F. A., M.D., 1315, Mass. Avenue, N.W., Washington, D.C., U.S.A.
- 1901 KING, E. J., M.D., Univ. Buffalo, 93, Niagara Street, Buffalo, U.S.A.

Elected

- 1898 †KINKEAD, RICHARD JOHN, M.D., L.R.C.S.I., Prof.
of Obstetrics, Queen's College, Galway, For-
ster House, Galway.
- 1839 KIRKLEY, C. A., M.D., 1105, Jefferson Street,
Toledo, Ohio, U.S.A.
- F.F. †KNOTT, CHARLES, M.R.C.P.Edin., Liz Ville, Elm
Grove, Southsea.
- 1903 †KNUTHSEN, LOUIS F. B., M.D.Edin., 33, Chesham
Place, s.w.
- 1902 LACKIE, JAMES LAMOND, M.D., F.R.C.P.Edin.,
2, Randolph Crescent, Edinburgh.
- 1898 LANDAU, L., M.D., Professor of Gynæcology of the
University of Berlin, Berlin.
- V.-P. 1900-3.
- 1902 LAST, CECIL EDWARD, M.R.C.S., L.R.C.P., Bles-
soe House, Littlehampton.
- L. 1886 †LAWRIE, JAMES MCPHERSON, M.D., Physician to
the Weymouth Sanatorium, Greenhill, Wey-
mouth. C. 1894-6. V.-P. 1899-1901.
- 1899 †LEA, ARNOLD WILLIAM WARRINGTON, M.D., B.S.
Lond., F.R.C.S.Eng., Assistant to the Pro-
fessor of Obstetrics, Owens College, Assistant
Surgeon to the Clinical Hospital for Women
and Children, Manchester, 274, Oxford Road,
Manchester.
- L. F.F. LEBLOND, ALBERT, M.D., Médecin de Saint-
Lazare, 53, Rue d'Hauteville, Paris.
- 1889 †LEIGH, W. W., L.R.C.P.Edin., M.R.C.S.Eng.,
L.S.A., Glyn Bargoed Treharris, R.S.O., South
Wales.
- L. F.F. †LE PAGE, JOHN FISHER, M.D., L.R.C.P.Edin.,
The Poplars, Cheadle, Cheshire.
- 1901 †LERMITTE, EDWARD AUGUSTUS, M.B., B.S., &c.,
96, Manor Road, Stoke Newington, N.
- F.F. *LESLIE, WILLIAM MURRAY, M.D.Edin., C.M.,
F.R.C.S.E.
- 1899 †LEWIS, PERCY GEORGE, M.D.BruX., M.R.C.S., 22,
Manor Road, Folkestone.
- 1891 †LLOYD, H. J., L.R.C.P.Edin., L.F.P.S.Glasg.,
Tyncoed, Barmouth, North Wales.

- Elected
 F.F. †LLOYD, SAMUEL, M.D., 60, Bloomsbury Street,
 Bloomsbury, W.C. C. 1904.
- 1902 LLOYD, THOMAS EDWARD, M.D.Brux., M.R.C.S.,
 L.R.C.P., Woodstock House, Abergavenny,
 Monmouthshire.
- 1893 †LLOYDE, JOHN HY., L.R.C.P., L.R.C.S.Edin.,
 6, Harpur Place, Bedford.
- F.F. †LOW, RICHARD MARSDEN PILKINGTON, M.B., C.M.,
 L.R.C.P., L.R.C.S.Edin., L.M., 70, Philbeach
 Gardens, S.W. C. 1896-8.
- 1901 LOWENTHAL, LOUIS L., M.R.C.S., &c., 3135,
 South Park Avenue, Chicago, U.S.A.
- 1894 LUTAUD, AUGUSTE, M.D.Paris, Rédacteur en Chef
 du Journal de Médecine de Paris; Médecin
 Adjoint de l'Hôpital St. Lazare, 47, Boule-
 vard Haussmann, Paris.
- F.F. †LYCETT, JOHN ALLAN, M.D.St. And., M.R.C.P.
 Edin., Consulting Gynæcologist Wolverhampton
 and District Hospital for Women, Gat-
 combe, Wolverhampton.
 Hon. Loc. Sec. C. 1889-91.
- 1899 †LYLE, ROBERT PATTON RANKEN, B.A., M.D.,
 B.Ch.Dub., Lecturer on Midwifery and Dis-
 eases of Women and Children, Durham
 University College of Medicine, 20, Saville
 Row, Newcastle-on-Tyne.
 Hon. Loc. Sec. C. 1904.
- F.F. †MACAN, Sir ARTHUR VERNON, M.B., M.Ch., M.A.O.
 Dub., F.R.C.P.I., President of the Royal
 College of Physicians, Ireland, King's Pro-
 fessor of Midwifery Trinity College, Obstetric
 Physician Sir P. Dun's Hospital, Ex-Master of
 the Rotunda Hospital, Dublin, 53, Merrion
 Square, Dublin. C. 1890-2.
 V.-P. 1887-8 & 1904. Pres. 1889.
- L. 1885 †MACAN, JAMESON JOHN, M.A., M.D.Camb., Cheam,
 Surrey. C. 1895-7. V.-P. 1898-1900.
 Editor, 1899-1904.
- 1899 †MCARDLE, JOHN STEPHEN, F.R.C.S.I., Surgeon to
 St. Vincent's Hospital, 7, Upper Merrion
 Street, Dublin.

- Elected
 1890 †MACCORMAC, JOHN SIDES DAVIES, L.R.C.P. & L.R.C.S.Edin., L.F.P.S.Glasg., Iveagh House, Belgrave, Leicester.
- 1895 †MCDONALD, JAMES, M.D.Edin., Bloxwich, Wallsall, Staffs.
- 1898 †MACDONNELL, ALEXANDER, L.R.C.S.Edin. & L.S.A., Manor Lodge, Stamford Hill, N.
- 1902 *MCDOWELL, WILLIAM, jun., M.D., British Columbia.
- 1897 MACGREGOR, PETER, F.R.C.S.Edin., Rashcliffe, Huddersfield.
- L. 1889 MACKAY, WILLIAM ALEXANDER, M.D., F.R.C.S. Edin., Huelva, Spain.
- L. 1888 †MACKINTOSH, G. D., L.R.C.P.I., L.M.Edin., 24A, Morat Street, North Brixton, S.W.
- 1898 †MCMANUS, LEONARD STRONG, M.D., Westwood House, St. John's Hill, S.W.
- 1892 MACMURTRY, L. S., M.D., 1912, Sixth Street, Louisville, Kentucky, U.S.A.
- F.F. †MACNAUGHTON-JONES, H., M.D., M.Ch., M.A.O., R.U.I., F.R.C.S.I. and Edin., late Examiner in Midwifery Royal University, Ireland, and Professor of Midwifery Queen's College, Cork, 131, Harley Street, W.
 C. 1890-2 & 1900-2. V.-P. 1895-7 & 1903-4. Pres. 1898-9.
- 1897 †MACNAUGHTON-JONES, H. M., M.B., B.Ch., R.U.I., L.R.C.P., M.R.C.S., 12, Sandwell Mansions, West End Lane, N.W. Editor 1900-2.
- 1894 *MADDIN, JOHN WALSEY, jun., M.D.
- 1903 †MAILER, WILLIAM, M.B., C.M.Edin., Holmwood, Palace Gates Road, Wood Green, N.
- 1888 MANTON, WALTER PORTER, M.D., 32, Adams Avenue, W., Detroit, Mich., U.S.A.
- 1895 *MARTIN, CHARLES, M.B., C.M.Edin.
- 1891 †MARTIN, CHRISTOPHER, M.B.Edin., C.M., F.R.C.S. Eng., Surgeon Birmingham and Midland Hospital for Women, Cleveland House, George Road, Edgbaston, Birmingham.
 Hon. Loc. Sec. C. 1897-9. V.-P. 1903-4.
- 1896 MATTICE, RICHARD ISA, M.D.McGill, L.R.C.P. Lond., Omaha, Nebraska, U.S.A.

Elected	
1896	†MAYBURY, LYSANDER, M.D., M.Ch., R.U.I., M.R.C.S.Eng., 9, Hampshire Terrace, Southsea.
1891	†MEARNS, WILLIAM, M.A., M.D., Physician Children's Hospital, Gateshead-on-Tyne, 22, Bewick Road, Gateshead-on-Tyne.
1891	MEEK, H., M.D., 331, Queen's Avenue, London, Ontario, Canada.
1887	MENDES DE LEON, M.A., M.D., Sarphati Straat, 1H, Amsterdam. C. 1892.
L. 1886	MERRIMAN, HENRY P., M.D., 2239, Michigan Avenue, Chicago, U.S.A.
1896	†METCALFE, JAMES, M.D.Brux., L.R.C.P., L.R.C.S. Edin., Surgeon to St. Catherine's Home for Cancer, Bradford, 8, Heaton Grove, Bradford, Yorks.
1891	†MICHIE, H., M.B.Aberd., C.M., Surgeon to the Samaritan Hospital, 27, Regent Street, Nottingham. C. 1894-6.
1895	†MILLER, FREDK. R., M.D.Brux., L.R.C.P.Lond., 19, Harley Street, w.
1896	†MINCHIN, P. DUNDAS, L.R.C.P., L.R.C.S.Edin., Oldcroft, Godalming, Surrey.
L. 1888	MOLESWORTH, Major WILLIAM, I.M.S., M.B., B.S. Durh., M.R.C.S., L.R.C.P., c/o Messrs. Grindlay and Co., 54, Parliament Street, s.w.
1892	†MOLSON, JOHN CAVENDISH, M.D., 10, Walsingham Terrace, West Brighton.
1902	†MONDY. SAMUEL LEE CRAIGIE, M.R.C.S., L.R.C.P., Grove Hall Asylum, Fairfield Road, Bow, E.
1896	MORGAN, THOMAS HOWARD, M.D., F.R.C.S.Edin., Gympie, Queensland, Australia.
1887	†MORISON, ALBERT EDWARD, M.B., C.M.Edin., F.R.C.S.Edin., Wellington Road, West Hartlepool.
1891	†MORISON, J. RUTHERFORD, M.B., F.R.C.S., Surgeon Newcastle-on-Tyne Infirmary, 14, Saville Row, Newcastle-on-Tyne. C. 1894-6.
1894	MORLAND, CHARLES HENRY DUNCAN, M.B., B.S. Durh., F.R.C.S., Swatow, China.
1898	†MORRIS, RICHARD JOHN, M.D.Durh., M.R.C.S., L.R.C.P., L.S.A., Southfield, York Place, Harrogate.

Elected

- F.F. †MORTON, THOMAS, M.D.Lond., M.R.C.S., L.S.A.,
Ex-President of the Harveian Society of
London, 15, Greville Road, Kilburn, N.W.
C. 1889-90 & 1899-1901.
- 1898 †MOSSE, HERBERT RYDING, M.D., M.R.C.S.Eng.,
37, North Side, Clapham Common, S.W.
- F.F. †MOULLIN, J. A. MANSELL, M.A., M.B.Oxon.,
M.R.C.P., Physician to the Hospital for
Women, Soho, Physician for Diseases of
Women to the West London Hospital, 80,
Porchester Terrace, Hyde Park, W.
C. 1884-6. Hon. Sec. 1887-8. V.-P.
1889-91 & 1903-4. Libr. 1892. Treas.
1893-1900. Pres. 1901.
- 1902 †MOWLL, RICHARD ROTHWELL, M.B., B.S.Lond.,
Beresford, Hook Road, Surbiton.
- 1900 †MURPHY, J. KEOGH, M.A., M.D., B.C.Camb., 35,
Princes Square, Bayswater.
- 1896 MURRAY, CHAS. F. K., M.D., R.U.I., F.R.C.S.,
Kenilworth House, Cape Town, S. Africa.
- 1885 †MURRAY, ROBERT MILNE, M.A.St.And., M.B.Edin.,
F.R.C.P.Edin., F.R.S.E., Assistant Physician
Maternity Hospital, Lecturer on Midwifery
and Gynæcology Edinburgh School, Physician
for Diseases of Women to the Western Dis-
pensary, Assistant Gynæcologist to the Edin-
burgh Royal Infirmary, 11, Chester Street,
Edinburgh. C. 1886-8. V.-P. 1899-1901.
- 1891 †MURRAY, WILLIAM, M.D., F.R.C.P., Consulting
Physician Newcastle-on-Tyne Hospital for
Sick Children, 9, Ellison Place, Newcastle-on-
Tyne.
- F.F. †MUTCH, F. ROBERTSON, M.D., C.M.Aberd., Surgeon
to the Samaritan Hospital for Women,
Nottingham, "Strathgairn," Goldsmith
Street, Nottingham.
- 1891 *NAPIER, A. D. LEITH, M.D., M.R.C.P.Lond., F.R.S.
Edin., late Physician Royal Maternity Charity
of London, and Examiner in Midwifery and
Gynæcology, Apothecaries' Hall.
C. 1892. Hon. Sec. 1893-4. Editor
1894-6. V.-P. 1895-7.

Elected

- 1889 †NAUMANN, J. C. FRANCIS, M.D.Brux., L.R.C.P.
Lond., M.R.C.S.Eng., Physician Italian Hos-
pital, 12, Bedford Square, w.c.
- 1894 †NEATBY, EDWIN A., M.D.Brux., L.R.C.P.Lond.,
82, Wimpole Street, w.
- 1891 NEDWILL, COURTENAY, M.D., R.U.I., M.R.C.S.,
Christchurch, Canterbury, New Zealand.
- L. 1886 NELSON, DANIEL THURBER, M.D., 2400, Indian
Avenue, Chicago, U.S.A.
- L. F.F. †NETHERCLIFT, WILLIAM HENRY, F.R.C.S.Edin.,
8, St. George's Place, Canterbury.
- L. F.F. NEUGEBAUER, FRANZ VON, M.D., Directeur de
l'Hôpital Evangelique, Leszno, 33, Warsaw,
Russia (Poland). V.-P. 1887-9.
- 1898 †NEVILLE, THOS., M.D., R.U.I., 123, Sloane Street,
S.W.
- 1896 †NEWNHAM, WILLIAM HARRY CHRISTOPHER, M.A.,
M.B.Camb. M.R.C.S., Physician Accoucheur
Bristol General Hospital, Chandos Villa,
Queen's Road, Clifton. C. 1898-1900.
- 1898 NOBLE, CHARLES P., M.D.Maryland, 159, Locust
Street, Philadelphia, Pa., U.S.A.
- 1896 †O'BRYEN, JAMES WHEELER, M.D.Vermont,
L.R.C.P., L.R.C.S.Edin., Burgill, Sydenham,
S.E.
- 1898 †O'CONNOR, WILLIAM MOYLE, M.A., M.D.Dub.,
Lyndhurst, Cargate, Aldershot.
- 1885 O'DONNELL, THOMAS JOSEPH, L.R.C.P.I., L.M.,
L.R.C.S.I., Major R.A.M.C., Champion Reef,
Mysore, India.
- 1898 †O'HAGAN, PATRICK FRANCIS, L.R.C.P., L.R.C.S.
Edin., Tower House, London Road, Croydon.
- 1895 *OLIVER, FRANKLIN HEWITT, L.R.C.P.Lond., L.S.A.
- 1894 †OLIVER, JAMES, M.D., M.R.C.P.Lond., F.R.S.
Edin., Physician to the Hospital for Women,
Soho Square, W., 18, Gordon Square, w.c.
C. 1896-98. V.-P. 1900-2.
- 1891 †OLIVER, THOS, M.A., M.D., F.R.C.P., Professor of
Physiology University of Durham, Physician
Newcastle-on-Tyne Infirmary, 7, Ellison Place,
Newcastle-on-Tyne. C. 1892-4.

Elected

- 1898 †OPPENHEIMER, HEINRICH, M.D.Heidelberg,
M.R.C.P.Lond., 63, Finsbury Pavement, E.C.
- L. 1889 OSTROM, H. J., M.D., 42, West 48th Street, New
York, U.S.A.
- F.F. †PADMAN, JOHN, M.R.C.S.Eng., 22, Bloomsbury
Square, W.C. C. 1904.
- L. 1888 PARKINSON, J. TAYLOR, M.D., Brook View, Crystal
Brook, South Australia.
- 1898 †PARSONS, JOHN INGLIS, M.D., M.R.C.P., Physician
to the Chelsea Hospital for Women, 3, Queen
Street, Mayfair, W. C. 1900-2.
- 1903 PATERSON, CHARLES EDWARD, M.D., C.M.Edin.,
Stirling Lodge, Farnborough, Hants.
- 1898 *PATTISON, EDWARD SETON, M.R.C.S., L.R.C.P.
Edin.
- 1898 †PEARSON, CHARLES YELVERTON, M.D., M.Ch.,
1, Sidney Place, Cork. Hon. Loc. Sec.
- 1899 PECK, FRANCIS SAMUEL, M.R.C.S., L.R.C.P.,
Lieut.-Col. Indian Medical Service, Professor
of Midwifery and Obstetric Physician at
Calcutta Medical College, 6, Harrington Street,
Calcutta.
- 1903 PESTALOZZA, ERNESTO, Professor of Clinical Ob-
stetrics and Gynæcology, Florence, Via Alfani,
60.
- 1903 PETERSON, F. C., M.D.Buffalo, Watertown, U.S.A.
- 1891 †PHILIPSON, Professor Sir GEORGE HARE, M.A.,
M.D.Camb., D.C.L., F.R.C.P., Professor of
Medicine University of Durham, Senior Phy-
sician Newcastle-on-Tyne Infirmary, 7, Eldon
Square, Newcastle-on-Tyne.
- L. 1903 PHILLIPSON, CECIL E. JONES, M.D., Brux., &c.,
Port Alfred *via* Grahamstown, Cape Colony.
- 1902 PHILLIPS, JAMES, F.R.C.S.Edin., M.R.C.S.,
L.R.C.P., 2, Duckworth Grove, Bradford,
Yorks.
- L. F.F. PINARD, ADOLPHE, M.D., Professeur à la Faculté,
Accoucheur de Lariboisière, 11, Rocqueline,
Paris. V.-P. 1900-1.

Elected

- L. 1885 POLK, WILLIAM M., M.D., Ex-President New York Obstetrical Society, &c., &c., 7, East Thirty-Sixth Street, New York, U.S.A.
- 1886 †POPE, HARRY CAMPBELL, M.D.Lond., F.R.C.S., 6, Ashchurch Grove, Goldhawk Road, Shepherd's Bush, w. C. 1890-2.
- 1891 †POULTER, ARTHUR REGINALD, M.R.C.S., L.R.C.P., 4, Gordon Mansions, Gower Street, w.c.
- 1903 POUNDS, THOMAS HENDERSON, F.R.C.S., Surgeon Derbyshire Hospital for Women, 64, Friargate, Derby.
- F.F. †PURCELL, FERDINAND ALBERT, M.D., M.Ch., R.U.I., M.R.C.S., L.N.Eng., Surgeon to the Cancer Hospital, Brompton, 7, Manchester Square, w. Auditor 1895-1904. C. 1888-9, 1893-5.
- L. F.F. †PUREFOY, RICHARD DANCER, M.D.Dub., F.R.C.S.I., Obstetric Surgeon Adelaide Hospital, Master of the Rotunda Hospital, 20, Merrion Square, Dublin. C. 1884-6. V.-P. 1899-1901.
- 1895 †PUTSEY, WILLIAM H., M.D.Durh., M.R.C.S., Fleet-Surgeon (retired) R.N., Medical Registrar South London Hospital for Women, 28, Ladbroke Gardens, w.
- 1887 †RAE, GEORGE A., L.R.C.P., L.R.C.S.Edin., 1, Outram Terrace, Stoke, Devonport.
- 1894 †RAMSAY, FRANK WINSON, M.D., B.S.Durh., F.R.C.S.Edin., Jesmond Dene, Bournemouth. C. 1900-2.
- L. F.F. *RASCH, ADOLPHUS A. F., M.D., M.R.C.P., late Physician for Diseases of Women and Children to the German Hospital, London, Blumenstrasse 5, Halle a Saale, Germany. C. 1891-3. V.-P. 1895-6.
- F.F. †RAWLINGS, JOHN ADAMS, M.R.C.P.Edin., M.R.C.S. Eng., Physician to the Swansea Hospital, Preswylfa, Swansea. C. 1889-90.
- 1903 RAYNER, DAVID CHARLES, F.R.C.S.Eng., Assistant Physician Accoucheur Bristol General Hospital, 9, Lansdown Place, Victoria Square, Clifton, Bristol.

Elected

- 1898 †REDFERN, JOHN J., M.D., M.A.O., Surgeon to the Croydon General Hospital, Croindene, Wellesley Road, Croydon.
- L. 1887 REED, CHARLES A. L., M.D., Professor of Gynæcology and Abdominal Surgery at the Cincinnati College of Medicine and Surgery, and Surgeon to the Cincinnati Free Surgical Hospital for Women, Cincinnati, Ohio, U.S.A.
- 1901 REID, DUNCAN JAMES, M.D., Shanghai, China.
- F.F. †REID, W. LOUDON, M.D.Glasg., F.F.P.S.Glasg., Professor of Midwifery and Diseases of Women and Children, Anderson's College, Glasgow, Physician to Dispensary for Diseases of Women, Western Infirmary, 7, Royal Crescent, Glasgow. C. 1888-9. V.-P. 1896-8.
- 1898 †RICE, GEORGE, M.D.Durh., 46, Friargate, Derby.
- F.F. *RICHARDSON, JOHN HUMPHREY HOWARD, M.R.C.S.
- L. 1888 RICKETTS, E. S., M.D., 93, East Fourth Street, Cincinnati, Ohio, U.S.A.
- L. F.F. †ROBERTS, D. LLOYD, M.D., F.R.C.P., F.R.S. Edin., Physician to St. Mary's Hospital, Manchester, and Lecturer on Clinical Midwifery and the Diseases of Women in Owens College, 11, St. John's Street, Manchester. C. 1884. V.-P. 1896-8.
- F.F. †ROBERTS, THOMAS, L.S.A.Lond., 2, Selborne Gardens, York Road, Ilford, Essex.
- L. F.F. *ROBERTSON, A. MILNE, M.D.Edin.
- 1901 †ROBINSON, EDWARD TAIT, M.D., 21, Gloucester Place, Portman Square, w.
- 1898 †ROBINSON, MALACHI J., M.D.Ch., R.U.I., 257, Essex Road, Canonbury, n.
- 1888 †ROBSON, ARTHUR W. MAYO, F.R.C.S.Eng., L.R.C.P. Lond., Emeritus Professor of Surgery Yorkshire College, Senior Surgeon Leeds General Infirmary, 8, Park Crescent, Portland Place, w. Hon. Loc. Sec. C. 1893-5, 1898-1900 & 1903-4. V.-P. 1896. Pres. 1897.
- L. 1885 ROSEBRUGH, JOHN WELLINGTON, M.D., Hamilton, Ont., Canada.

Elected

- L. 1888 ROSS, JAMES F. W., M.D., C.M., L.R.C.P.Lond.,
Professor of Gynæcology and Abdominal Sur-
gery Ontario Medical College for Women,
Gynæcologist to Toronto General Hospital, St.
Michael's Hospital and St. John's Hospital for
Women, 184, Sherbourne Street, Toronto,
Canada. Hon. Loc. Sec.
- 1898 †ROTHEROE, WILLIAM BURSLEM, L.R.C.P., L.R.C.S.
Edin., 47, Gloucester Place, w.
- 1901 †ROUNTREE, WILLIAM AUGUSTINE, M.D., M.Ch.,
R.U.I., 21, Malden Crescent, N.W.
- F.F. †ROUTH, CHARLES HENRY FELIX, M.D., M.R.C.P.,
Consulting Physician to the Samaritan Free
Hospital, 52, Montague Square, w.
V.-P. 1884-6 & 1896-8. C. 1888-9, 1891-4
& 1899-1901. Pres. 1890. Hon. Fellow.
1901.
- L. F.F. RUSSELL, LOGAN D. H., M.D., M.R.C.S., Glenfern,
Halfway Tree, Jamaica.
- 1897 †RYALL, CHARLES, F.R.C.S., Surgeon to the Cancer
Hospital, Surgeon to the Gordon Hospital,
Surgeon to Out-patients London Lock Hos-
pital, 51, Queen Anne Street, w.
Hon. Sec. 1900-2. C. 1903-4.
- 1901 †ST. AUBYN-FARRER, CLAUDE, L.R.C.P., L.R.C.S.
Edin., 7, Westbourne Park Road, Porchester
Square, w.
- 1895 *SAMBON, LUIGI, M.D.
- 1895 *SAUNDERS, FREDERICK HERBERT, M.D., C.M.Aberd.
- 1902 SAVAGE, ERNEST SMALLWOOD, M.A., M.B., B.Ch.
Oxon, F.R.C.S., 133, Edmund Street, Birming-
ham.
- F.F. †SAVAGE, THOMAS, M.D., M.R.C.P., F.R.C.S.Eng.,
Professor of Gynæcology, Mason's College,
Surgeon Birmingham and Midland Hospital,
133, Edmund Street, Birmingham.
C. 1884-6 & 1895-7. V.-P. 1889-91. Pres.
1894.

Elected

- 1892 †SCHACHT, F. F., M.D., B.A.Camb., late Physician to Out-Patients Chelsea Hospital for Women, 153, Cromwell Road, s.w.
Hon. Sec. 1893-6. Editor 1896-9. V.-P. 1897-9 & 1903-4. C. 1900-2.
- 1891 †SCOTT, EDWARD IRWIN, M.D.St. And., 69, Church Road, West Brighton.
- 1887 †SHAW, JOHN, M.D.Lond., M.R.C.P.Lond., Obstetric Physician and Gynæcologist North-West London Hospital, 32, New Cavendish Street, Cavendish Square, w.
C. 1888-90. V.-P. 1901-3. Hon. Sec. 1895-7.
- 1901 SHEARER, ALFRED, M.B., Ch.B., c/o Dr. Purchas, Newtown, N. Wales.
- 1901 SHEPHERD, THOMAS WILLIAM, L.R.C.S.Edin., Castle Hill House, Launceston, Cornwall.
- 1895 †SIMEON, E. ARCHIBALD, L.R.C.P., L.R.C.S.Edin., 550, Hoe Street, Walthamstow, N.E.
- 1889 †SIMPSON, ALEXANDER RUSSELL, M.D., F.R.C.P. Edin., F.F.P.S.Glasg., F.R.S.E., Professor of Midwifery and Diseases of Women Edinburgh University, Physician for Diseases of Women Royal Infirmary and Maternity Hospital, 52, Queen Street, Edinburgh.
V.-P. 1890-1. Pres. 1892. C. 1893-5.
- 1898 *SIMPSON, JOHN POLLOCK, M.D.
- 1903 †SIMSON, HENRY J. FORBES, M.B., C.M.Edin., F.R.C.S.Edin., M.R.C.P.Lond., Assistant Physician, Hospital for Women, Soho Square, w., 80, Brook Street, w.
- 1899 †SINCLAIR, WILLIAM JAPP, M.D.Aberd., M.R.C.P., Professor of Obstetrics and Gynæcology Victoria University, and Physician to the Southern Hospital, Manchester, 250, Oxford Road, Manchester. C. 1900. V.-P. 1901.
- F.F. †SLIMON, WILLIAM HY., M.D., M.Ch., F.F.P.S.Glasg., 26, New Cavendish Street, w.
C. 1899-1900 & 1902-3. Treas. 1904.
- 1886 †SLOAN, SAMUEL, M.D., F.F.P.S.Glasg., Consulting Physician to the Glasgow Maternity Hospital, 5, Somerset Place, Sauchiehall Street, West Glasgow.
C. 1889-91.

Elected

- L. 1887 †SMART, DAVID, M.B., B.Sc.Edin., 74, Hartington Road, Liverpool.
- 1889 †SMITH, ALFRED J., M.B., M.Ch., M.A.O., R.U.I., Professor of Midwifery and Diseases of Women Catholic University, Dublin, Gynæcologist St. Vincent's Hospital, 30, Merrion Square, Dublin. C. 1896-8. V.-P. 1902-4.
- 1898 SMITH, ARTHUR LAPHORN, B.A., M.D., M.R.C.S., Professor of Clinical Gynæcology Bishops University, Montreal, Surgeon-in-Chief Samaritan Free Hospital for Women, Gynæcologist to the Montreal Dispensary, Surgeon to the Western General Hospital, 7248, Bishop Street, Montreal, Canada.
Hon. Loc. Sec.
- L. F.F. †SMITH, E. T. AYDON, L.S.A., Devon Lodge, 2, Alexandra Road, St. John's Wood, N.W.
C. 1898-9.
- L. F.F. †SMITH, HEYWOOD, M.A., M.D., M.R.C.P., 25, Welbeck Street, W.
Hon. Sec. 1884-5. C. 1889-91 & 1898-1900. V.-P. 1892-4, 1901-2 & 1904.
Pres. 1903.
- 1891 †SMITH, JAMES WILKIE, M.D., Balgonie House, Ryton-on-Tyne, Durham.
- F.F. †SMITH, RICHARD T., M.D., M.R.C.P., Physician to the Hospital for Women, Soho, 53, Harley Street, W.
C. 1884-6, 1898-1900 & 1903-4. Hon. Sec. 1889-90. V.-P. 1891-93.
- F.F. †SMYLY, WILLIAM JOSIAH, M.D., T.C.D., F.R.C.P.I., F.R.C.S.I., late Master of the Rotunda Hospital, Examiner in Midwifery, R.C.P.I., Dublin, 58, Merrion Square, Dublin.
C. 1888-90 & 1901-3. V.-P., 1892-4.
Pres. 1900.
- 1895 †SMYTH, ALEXANDER CARSON, M.B., C.M.Edin., Lochiel, 16, Craven Park, Willesden, N.W.
- F.F. †SMYTH, BRICE, B.A., M.D., M.Ch., T.C.D., Consulting Physician Hospital for Sick Children, Physician Belfast Lying-in Hospital, 20, University Square, Belfast.
C. 1887-9. V.-P. 1889-91.

- Elected
 1893 †SMYTH, JOHN WALKER, L.R.C.P., L.R.C.S.Edin.,
 13, Colebrook Row, City Road, N.
 1896 †SNOW, HERBERT, M.D.Lond., M.R.C.S., &c., Senior
 Surgeon Cancer Hospital, Brompton, 14,
 Stratford Place, W. C. 1902-4.
 F.F. †SPANTON, W. DUNNETT, F.R.C.S.Eng., J.P., Sur-
 geon to the North Staffordshire Infirmary,
 Chatterley House, Hanley, Staffordshire.
 C. 1887-9 & 1901-4. V.-P. 1890-92.
 1898 SPEARING, ANDREW, L.F.P.S.Glasg., Victoria
 House, Albert Road, Eccles, Lancs.
 1898 SPROTT, WM. J., M.D., M.Ch., R.U.I., Heath-
 field, Eccles Old Road, Manchester.
 1903 STEALY, JEREMIAH H., M.D., Ph.D., Freeport,
 Illinois, U.S.A.
 1898 STEKOULIS, CONSTANTIN, M.D., Péra, Rue Soute-
 razi 7, Constantinople.
 1885 STEVENSON, EDMUND SINCLAIR, M.D.BruX.,
 F.R.C.S.Edin., Strathallan, Rondebosch.
 Cape Town, S. Africa.
 1897 *STEVENSON, JAMES, M.D.Glasg.
 1899 STEVENSON, WILLIAM JOHN, M.D., C.M., M.C.P. &
 S. Toronto, 391, Dundas Street, London,
 Canada.
 1892 STEWART-McKAY, W. J., M.B., M.Ch., B.Sc., Aus-
 tralian Club, Macquarie Street, Sydney, N.
 South Wales.
 L. 1888 STONE, ISAAC S., M.D., 1618, Rhode Island Avenue,
 N.W., Washington, D.C., U.S.A.
 1893 STONEY, RALPH, L.R.C.S.I., L.R.C.P.I., Medical
 Officer, Uganda Protectorate Service, Africa.
 1886 †STRANGE, W. HEATH, M.D., 2, Belsize Avenue,
 Hampstead, N.W.
 L. 1892 SULLIVAN, W. H., M.D., 80, Collins Street, Mel-
 bourne, Victoria.
 1885 †SUNDERLAND, SEPTIMUS, M.D., M.R.C.S., M.R.C.P.
 Lond., Physician to the Royal Hospital for
 Women and Children, 11, Cavendish Place,
 Cavendish Square, W. C. 1894-6 & 1902-3.
 L. 1892 SUTTON, R. STANBURY, M.D., 419, Penn Avenue,
 Pittsburg, U.S.A.

Elected

- 1899 †SWAN, RICHARD JOCELYN, M.R.C.S., L.S.A., Park House, 32, Camberwell New Road, s.w.
- 1900 †SWANTON, J. HUTCHINSON, M.D., M.A.O., R.U.I., M.R.C.P.Lond., 40, Harley Street, Cavendish Square, w. Hon. Sec. 1901-4.
- L. F.F. †TAYLER, WILLIAM HENRY, M.D.St.And., M.R.C.S. Eng., Upper Ensing House, Chilham, Kent.
- L. F.F. †TAYLOR, JOHN WILLIAM, F.R.C.S., Professor of Gynæcology Birmingham University, Surgeon to the Birmingham and Midland Hospital for Women, 22, Newhall Street, Birmingham. C. 1891-3, 1900-2. V.-P. 1894-6. Pres. 1904.
- 1902 TAYLOR, W. MACRAE, M.D., F.R.C.S.Edin., 12, Melville Street, Edinburgh.
- F.F. †TEMPLE, THOMAS CAMERON, M.R.C.S., L.S.A., Shefford, Beds.
- 1898 †THOMAS, JOHN LYNN, F.R.C.S.Eng., 21, Windsor Place, Cardiff.
- 1885 †THOMSON, DAVID, M.D., Stourfield Park Sanatorium, Bournemouth. C. 1897-9.
- 1893 †THOMSON, GEORGE, M.B., C.M.Glasg., 72, The Avenue, Ealing, w.
- 1898 †TIVY, WILLIAM JAMES, F.R.C.P., F.R.C.S.Edin., 8, Lansdowne Place, Clifton.
- 1895 †TRAVERS, F. T., M.B., B.S.Lond., F.R.C.S.Edin., Surgeon to the West Kent Hospital, 6, Clarendon Place, Maidstone.
- 1892 †TRAVERS, W., M.D., F.R.C.S., late Physician to the Chelsea Hospital for Women, 2, Phillimore Gardens, w. C. 1894-6 & 1900. V.-P. 1897-9 & 1904. Treas. 1901-3.
- 1895 TREUB, HECTOR, M.D., Professor of Obstetrics and Gynæcology University of Amsterdam, Vondelstraat, 83, Amsterdam. V.-P. 1897-9.
- 1898 *TROWER, ARTHUR, M.R.C.S.
- L. 1889 †TUOHY, JOHN FRANCIS, M.D., M.Ch., Lieut.-Col. I.M.S., Hova House, 1, Hova Terrace, Brighton.

Elected

1903 †TWEEDY, ERNEST HASTINGS, F.R.C.P.I., &c.,
Master of the Rotunda Hospital, Dublin,
Rotunda Hospital.

L. 1887 UNDERWOOD, EDWARD F., M.D., Port Bombay,
India.

L. 1885 VAN DER VEER, ALBERT, M.D., 28, Eagle Street,
Albany, New York, U.S.A.

1895 †VAUGHAN-JACKSON, HERBERT FRANCIS, L.R.C.P.,
M.R.C.S., Potter's Bar, Middlesex. C. 1904.

L. 1888 WALKER, HOLFORD, M.D., 56, Isabella Street,
Toronto, Ontario, Canada.

1903 WALKER, JAMES FREDERICK, L. & L.M., M.R.C.P.I.,
L.R.C.S.I., Elm Lodge, Swallowfield, Reading.

1889 †WALLACE, ABRAHAM, M.D. Edin., C.M., F.F.P.S.
Glasg., formerly Professor of Midwifery and
Diseases of Women Anderson's College, Glas-
gow, 39, Harley Street, w. C. 1894-6.

L. F.F. †WALTER, WILLIAM, M.A., M.D. Dub., F.R.C.S.I.,
Physician to St. Mary's Hospital, Manchester,
20, St. John's Street, Manchester.

Hon. Loc. Sec. C. 1884-6 & 1891-3. V.-P.
1888-90.

1895 WALTON, PAUL, M.D., Chirurgien-adjoint des
Hopitaux de Gand, 33, Quai des Tonneliers,
Ghent, Belgium.

L. 1897 WARD, CHARLES, F.R.C.S.I., 116, Long Market
Street, Pietermaritzburg, South Africa.

1891 WARD, J. L. W., J.P., L.R.C.P., Cladir, Merthyr
Tydvil, Glamorganshire.

1895 †WHEATLY, A. W., M.B. Durh., M.R.C.S., 1, Ken-
sington Square Mansions, Young Street,
Kensington.

1903 †WHITCOMBE-BROWN, W. H., M.B., B.S., &c., St.
Marks, Victoria Street, Surbiton.

1897 †WHITEHEAD, HENRY EDWARD, M.R.C.S., L.R.C.P.,
475, Caledonian Road, Holloway, N.

1898 *WIGLESWORTH, WALTER, L.R.C.P., L.R.C.S. Edin.

1898 *WIGMORE, ARTHUR W., L.R.C.P., D.P.H.

Elected

- 1890 †WILLIAMS, CYRIL JOHN, L.R.C.P., Brookside Woodhall Spa, Lincolnshire.
- 1897 †WILLIAMS, JOSEPH WILLIAM, M.R.C.S., L.R.C.P., 128, Mansfield Road, Gospel Oak, N.W.
- 1895 †WILLIAMSON, JOHN, M.B., C.M.Edin., Surgeon to Richmond Hospital, Rothsay House, Richmond, Surrey.
- L. 1888 †WILLIS, Lieut.-Col. C. FANCOURT, I.M.S., M.D., M.R.C.P., Felixstowe, The Avenue, Upper Norwood, S.E.
- 1898 †WILSON, GEORGE DUNN, L.R.C.P., L.R.C.S.Edin., 481, Wandsworth Road, S.W.
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